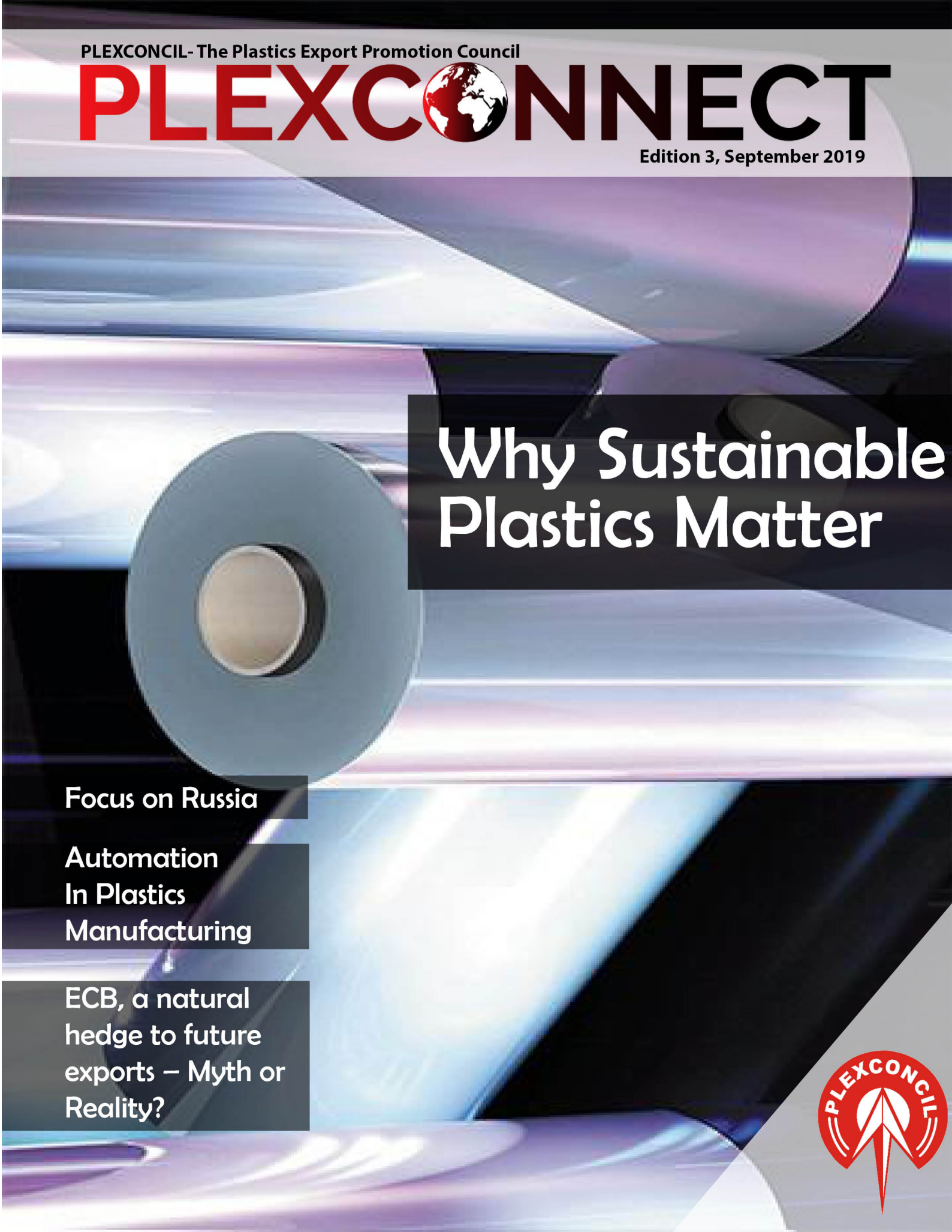
PLEXCONCIL- The Plastics Export Promotion Council

PLEXCONNECT

Edition 3, September 2019



Why Sustainable Plastics Matter

Focus on Russia

Automation In Plastics Manufacturing

ECB, a natural hedge to future exports – Myth or Reality?

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CONTENTS

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2nd -4th, December 2019

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THE PLASTICS EXPORT PROMOTION COUNCIL

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A strong export strategy is of great significance in a rapidly changing global trade landscape where shifting of global value chains, new free trade agreements, and fluctuating economies impact exports. A globally integrated value stream involving logistics and infrastructure support, skill development, trade and investments agreements is integral. Adoption of technology and innovation as well as promoting standards and certifications are also vital to export growth. The need to facilitate effective marketing strategies, product promotion and brand building initiatives are critical to our industry as well.

As the trade body representing Plastics exporters, we have aligned ourselves to the Government's vision to aggressively improving our trade balance. Over the past months, the Council has been working surely and steadily to create greater awareness of the benefits of the becoming an exporter. Roadshows and meets for export awareness have been successfully undertaken across manufacturing clusters in the country. By working closely with the MSME Ministry and DGFT in our efforts, we hope to encourage greater number of exporters to avail these benefits through the Council membership. The Council is set to soon lead a delegation of exporters to the USA to explore ways by which our exporters may benefit from new opportunities in the country. We also continue to explore, identify and target new export destinations such as CIS, LAC and African regions to help open up more markets to our members.

Meanwhile, in July 2019, India reported merchandise exports of USD 26.3 billion, up 1.7% from USD 25.9 billion in July 2018. In the same period, India exported plastics worth USD 709 million, down 2.9% from USD 730 million in July 2018. While most product groups registered good performance, Raw Materials (-19.3%) and Stationery/ Office Supplies (-5.7%) saw a YOY decline in exports for the period.

Finance is the lifeline of any business and in this issue, we take a look at how External Commercial Bonds can help exporters raise necessary liquidity without overlooking pertinent risks. Automation, Robotics & Industry 4.0 lie at the heart of all commerce and are critical to any iteration-based industry. In this issue, we have endeavoured to examine how to best approach and adapt technologies for better efficiencies. In this issue, we also examine the pros and cons of production of biodegradable plastics and recycling for sustainability in light of the ongoing criticism of single-use plastics world over.

Our Panel of the Month focuses on Polyester Films and Sheets, our third largest panel, and a segment that enjoys wide application. We have also focused on Russia as our export destination for the month under the section, Countryscape, besides bringing you export performance data, news and updates from around the world. As always, we are grateful for your support and look forward to receiving your comments and feedback. Remember, people working together in a strong community, with a shared goal and towards a common purpose can make the impossible, possible.

Sincerely,

Ravish Kamath
Chairman

Council Activities July 2019

Meeting with the Commissioner Customs, to discuss issues of Human Hair Exports on July 05, 2019 at Jeevan Bharti Building, New Delhi

The Council met Mr. M.G. Thamizh Valavan, Commissioner Customs, for exporters from the Human Hair sector to discuss issues of illegal trade and under invoicing in export of Human Hair. The Commissioner Customs was appraised about how export of Human Hair was badly affected due to illegal trade taking place, particularly from the North East to Myanmar and from there to China.

The Human Hair exporter present at the meeting explained to the Commissioner Customs the complete process of how the under invoicing and illegal trade was taking place, with specific inputs about the manner in which it was being transported and the particular border check posts from where it was being done. Commissioner Customs assured to address the issue and also represent the case to Directorate of Revenue Intelligence (DRI), as they are the nodal organisation that works at the operation level.

Export Awareness Seminar on July 05, 2019 at Bhubaneswar

Sribash Dasmohapatra, Executive Director, PLEXCONCIL presenting a Memento to Dr. S. K. Sahoo, Deputy Director & In-charge, MSME DI, Cuttack

The Export Awareness Seminar was organized by the Plastics Export Promotion Council (Plexconcil), in association with Directorate of Export Promotion & Marketing, Government of Odisha, ECGC, and Indian Oil Corporation Ltd., at Bhubaneswar on 5th July 2019.

The dignitaries who spoke at the seminar included Dr. S. K. Sahoo, Deputy Director & In-charge, MSME DI, Cuttack, Mr Sribash Dasmohapatra, Executive Director, Plexconcil, Mumbai, Mr. Debabrata Khastagir, General Manager (Zonal PC Sales), IOCL, Mr. Alak Mazumder, Deputy General Manager, Petrochemicals-Marketing, IOCL, Dr. P.S.G. Krishnan, Principal Director & Head, CIPET.

A presentation was made by ECGC about their role and services and by Emkay Global Financial Services Ltd. Mr Amit Pal, COA member, Plexconcil, also spoke about the benefit of exports and how to market product in the international market.

Plexconcil leads a delegation of the Plastic Industry to the Government of Karnataka on 12th July 2019

Plexconcil Chairman Mr. Ravish Kamath led a delegation of Plastic Industry of the state of Karnataka to meet Shri Gaurav Kapoor, IAS – Principal Secretary, Government of Karnataka and Mr. S R Satheesha – Managing Director, Visvesvaraya Trade Promotion Centre (VTPC) on 12th July 2019 to discuss on how Plexconcil could assist the State of Karnataka in increasing its Plastics Exports. The members of the delegation included the President of the Karnataka State Plastics Association – Mr. Vijay Kumar , Mr. Hariram Thakkar – Convenor , IPLEX 2019 and Mr. Krunal Goda – Senior Manager – Exhibitions from the Council. In the meeting Mr. Ravish Kamath talked about the opportunities for Indian Plastics Industry globally and the current scenario. He further explained the challenges faced by existing Exporters in the state as compared to other leading states of the country. The Principal Secretary took note of the points and assured the delegation to provide necessary assistance wherever required.

Participation in COMPACK-WOPS World of Products (Plastics+Rubber) and Packaging Expo 2019 from July 11-13, 2019 at Chennai

The Chennai office of the Council participated at the COMPACK World of Products (Plastics+Rubber) and Packaging Exhibition 2019, organized by M/s Smart Ex-

pos, at the Chennai Trade Centre in Chennai, from July 11-13, 2019. The Show is a sourcing platform for plastic and packaging products and was organized to showcase the advancements and growth of the plastics and rubber sector in India. Over 150 exhibitors, mainly from Tamil Nadu, Karnataka, Andhra Pradesh, Telangana, Kerala, Maharashtra and Gujarat exhibited in this Exhibition from the plastics, packaging and rubber industries.

Plexconcil was allotted a complimentary booth of 9 sqm to disseminate information regarding the Council's services, export potential for plastic products from India and mobilize membership. Mr. Y.V. Raman, Regional Chairman, Plexconcil, and TAPMA office-bearers also visited the Council's booth.

Export Awareness Programme during IPLEX 2019 Roadshow and Launch function on July 13, 2019 at Chennai

The Tamil Nadu Plastic Manufacturers Association (TAPMA) invited the Council to be part of the IPLEX 2019 Roadshow and Launch function, and make a presentation on 'Export Opportunities for Plastic Products' for the benefit of TAPMA members. The event, held at the Hotel Ambassador Pallava, Chennai, was supported by the Karnataka State Plastic Association (KSPA), Bangalore, the host state for this year's IPLEX 2019 Show, scheduled to be held from August 23-25, 2019 in Bangalore.

Mr. Virendra Bayani, President of Tamil Nadu Plastic Manufacturers Association (TAPMA) welcomed the gathering, which was followed by presentations on 'GST Amendments and Updates', jointly by Mr. A.P. Ravi, Advocate, and Mr. Jeevan Kumar, Chartered Accountant, and a presentation on the 'Union Budget 2019' mainly pertaining to Direct and Indirect Taxes, by Mr. Debasis Nayak, Associate Director, and Mr. Dhruv Kumar, Manager of Price Waterhouse & Co. LLP (PwC), Chennai.

Mr. Y.V. Raman, Regional Chairman, Plexconcil, made a detailed PowerPoint Presentation on 'Export Opportunities for Plastic Products and on Plexconcil Services', and emphasized the importance and rewards of venturing into export markets. He also highlighted the policies and assistance extended by the Department of Commerce, Government of India, for exporters. He briefed the entrepreneurs on the Foreign Trade Policy, on the role of Customs and Insurance of goods. He also briefed participants on Plexconcil Services, and on the process of enrolling for membership in the Council, and the Council's role in facilitating exports.

Around 180 plastic industry entrepreneurs and professionals participated in the Roadshow.

Meeting on "Import Substitution" on July 15, 2019 at Udyog Bhawan, New Delhi

A preliminary meeting chaired by Smt. Alka Arora, Joint Secretary in the Ministry of MSME was held to discuss and identify products which are currently being imported, but have the potential to be produced within the country by MSMEs. It was informed at the meeting, that there are 453 HS Codes at the 4 digit level that are being exported by the MSMEs.

The Council highlighted the issue of reducing import of finished PVC products, such as PVC floor covering. PVC floor covering have a great export potential, and its price competitiveness and volume of exports could increase immensely if post-industrial PVC scrap was allowed to be imported as an input for the manufacture and export of PVC floor covering on actual user basis. The lack of availability of PVC resin within the country, the main raw material required for production of PVC products, was also highlighted. It was also mentioned that the domestic demand for PVC resin was almost twice the domestic production of the same.

Special session on New Perspectives of Trade and Investment between India & Australia on July 17, 2019 at Kolkata

A meeting was organized by the Bharat Chamber of Commerce & Industry in Kolkata on 17th July 2019 and H.E. Mr. Andrew Ford, Consul General of Australia in Kolkata addressed the gathering. A first since the opening of the office. H.E. Mr. Andrew Ford emphasized that Australia considers India to be the top country for deepening and strengthening its International Partnership and West Bengal is one of the ten priority states with which it wants to forge an 'economic link'.

Export Awareness Programme held on July 19, 2018 at Bangalore

Council Activities July 2019

The Council, in line with Government of India's objective to boost Exports and make India a USD 5 Trillion Economy organized the 4th Export Promotion Awareness Programme in association with Karnataka State Plastics Association (KSPA), and was supported by the Office of the Addl. Directorate General of Foreign Trade, Development Institute of Bangalore, Ministry of MSME, ECGC and CIPET on July 19, 2019 at the RG Convention Centre, Yashwantpur, Bangalore.

The programme was attended by over 150 MSME companies attending from across Karnataka, who were willing to explore various opportunities in Global Markets. Over 80% of the participants were either manufacturers or traders who were involved in domestic trade and wished to explore their product potential in International Markets.

The objective of the Export Awareness Programme was to highlight the importance and benefits of exports; schemes & policies by Ministry of MSME & Department of Commerce benefitting exporters; understand the process to avail subsidies provided by Government of India; Foreign Trade Policy, Role of Customs In Exports, Benefits of Credit Insurance, process of enrolling for PLEXCONCIL memberships and seek Government benefits for exports; to understand the issues faced by the members while doing exports; to provide market intelligence; i.e., important export destination with product potential.

The Event concluded on a positive note where 6 MSMEs applied for the Council's membership and to avail the benefits of Exports. The event was part sponsored by Drip Capital.

Export Awareness Seminar on July 27, 2019 at Jaipur, Rajasthan

The Council's Delhi Office, in association with Plastic Manufacturers Association Rajasthan, organized an "Export Awareness Seminar" at the Shakun Hotels & Resorts, in Jaipur, on Saturday, 27th July, 2019, to create awareness about the export potential for plastic items, and promote export of plastics from Rajasthan. The event was held under the auspices of the Department of Commerce, Ministry of Commerce & Industry, and supported by Ministry of MSME and ECGC Ltd.

The Joint Director General Foreign Trade, Jaipur, Mr. C.K. Mishra, was the Chief Guest at the event. Mr. Vijay Shanker Pandey, Under Secretary, Department of Commerce, also graced the occasion. Mr. Vikram Bhadauria, Regional Chairman (Northern Region) and Mr. Manoj Agarwal, COA Member and former Chairman of the Council, were also present to address and motivate the plastic processors from in and around Jaipur to enter exports. The Branch manager of ECGC Ltd., Jaipur branch, also addressed the gathering with regard to the various policies of ECGC, particularly for the MSME sector, to protect against default in payment by a foreign buyer, when undertaking exports.

The various schemes & policies implemented by Department of Commerce, Ministry of Commerce & Industry, the Ministry of MSME and ECGC Ltd. to promote exports were discussed at the seminar.

The Council highlighted the major markets for export of plastic items produced in and around Jaipur, the financial assistance available for exports and basic guidance on how to export, the various trade fairs organized abroad by the Council, and the Buyer-Seller Meet to be organized in Mumbai, where the Council would be inviting foreign buyers from over 35 countries during CAPINDIA 2019 exhibition.

Mr. Vikram Bhadauria, Regional Chairman (North), in his welcome address emphasized the importance of exports in a challenging economic environment, with globalization and reduction in import duties under the various Free Trade Agreements being signed by India, making it essential for organisations to be internationally competitive for survival in the long run. He urged all Plastic Processors present to come forward and tap this huge opportunity, stating that Plexconcil is there to hand hold a new comer and provide all the guidance to be successful in exports.

Mr. Manoj Agarwal, Board Member and former Chairman of the Council spoke about the experience of his own organization, and how it has grown over the years, with exports being the main objective rather than trying to export one's surplus production.

Jt. Director General Foreign Trade, Jaipur, Mr. C.K. Mishra, highlighted the Advance Authorisation Scheme, and Export Promotion Capital Goods Scheme (EPCG) of the Government under which raw materials and capital goods required for export production could be imported

on duty free basis. Mr. Sumer Singh, President, Plastic Manufacturers Association Rajasthan, highlighted issues faced by the plastics industry in Rajasthan, Mr. Ashish Verma, branch manager, ECGC Ltd., Jaipur highlighted the services offered by ECGC to protect the exporter from default in payment by the foreign buyer.

The seminar witnessed around 100 participants and received wide media coverage in the press as well as local TV channels.

Interactive Session with Hon'ble Minister, Mr. Piyush Goyal on emerging opportunities to enhance India's exports USA and China on July 31, 2019 at New Delhi

The following issues were highlighted by the Hon'ble Minister, Mr. Piyush Goyal, at the interactive session organized by FIEO at Hotel Ashok, New Delhi, on July 31, 2019:

- Government is now moving towards ROSCTL, and phasing out MEIS. Associations / EPCs need to compile data, to work out the quantum of ROSCTL for their particular industry. Any State or Central levy should be highlighted to the Government for reimbursement.
- Any unfair trade practice or dumping of products into India by any country should be highlighted to DOC. Any kind of protectionist policies being practiced by any country should also be highlighted.
- Industry should support / encourage capacity addition in raw material production within the country.
- Need to seize the opportunity emerging from the USA-China trade war.
- The Minister also emphasized, that there also exists a great opportunity to increase our export to countries with whom India has a significant trade deficit.

Important Circulars and Notifications

Regarding Gold Card Scheme for Exporters

The Government (Ministry of Commerce and Industry), in consultation with RBI had indicated that a Gold Card Scheme would be worked out by RBI for creditworthy exporters with good track record for easy availability of export credit on best terms. Accordingly, in consultation with selected banks and exporters, a Gold Card Scheme was drawn up. The Scheme envisages certain additional benefits based on the record of performance of the exporters. The Gold Card holder would enjoy simpler and more efficient credit delivery mechanism in recognition of his good track record.

Please refer to para 8.1.3 of the Master Circular DBR No.DIR.BC.14/04.02.002/2015-16 dated July 01, 2015 (https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=9852&Mode=0) wherein detailed instructions on 'Gold Card Scheme for Exporters' have been given.

RBI has received various representations from exporters and trade Associations that the banks are not extending the benefits under the Gold Card Scheme as per extant instructions. It is, therefore, reiterated that the instructions relating to the Gold Card Scheme for Exporters as contained in above-mentioned Master Circular shall be strictly implemented and the branch level functionaries suitably sensitized in this regard.

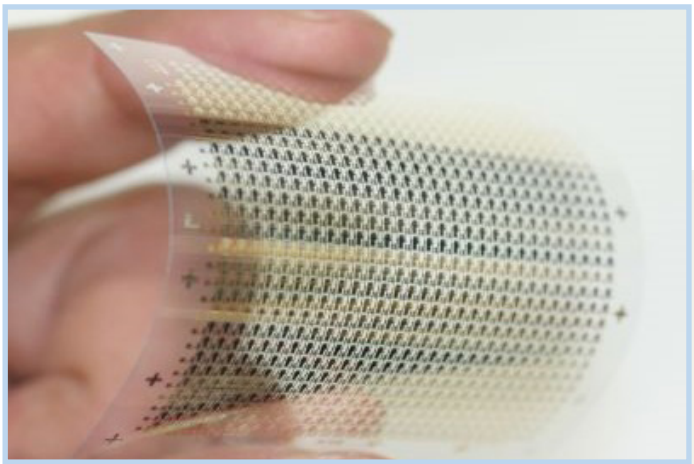
The said circular is available for reference on http://plexconcil.co.in/images/circulars/Gold_card_Scheme.pdf

International News

Growing demand from electronics, packaging, automotive tires drives global polyethylene naphthalate market

Growing demand from the end user industries such as electronics, packaging industries coupled with rising sales of automotive tires are driving the global polyethylene naphthalate (PEN) market. The global polyethylene naphthalate (PEN) market is expected to grow from US$1.17 billion in 2018 to US$1.93 billion by 2026, at a CAGR of 6.38% during the forecast period from 2019-2026, according to a report published by Fior Markets. Polyethylene naphthalate is a polyester resin derived from naphthalene-2, 6-dicarboxylic acid and ethylene glycol. It is chemically quite similar to polyethylene terephthalate, however, it exhibits superior temperature resistant property. Polyethylene naphthalate is available only as biaxially oriented and heat stabilized films. These films are semi-crystalline and colorless, either crystal clear or slightly hazy. These films display improved UV resistance and barrier properties. Thus, polyethylene naphthalate films have emerged as a key component of food packaging applications. These films are also utilized in the production of pressure sensitive tapes and thermal sheets. Consequently, rising demand for the packaged food & beverages owing to changing lifestyle and increase in disposable income is driving the global demand for the polyethylene naphthalate (PEN) over the forecast period.

Even though the factors such as growing demand for packaged food and beverages as well as growing utilization of the polyethylene naphthalate (PEN) films in the electronics industry are driving the global polyethylene naphthalate (PEN) market, the high cost of raw materials coupled with high production cost are expected to restrain the growth of the market over the forecast period. However, potential applications in the solar industry as well as growing demand for high performance tires are anticipated to create new opportunities for the polyethylene naphthalate (PEN) market growth in upcoming years.



The application segment for (PEN) is divided into beverage bottling, packaging, electronics, automotive tires and others. Owing to their higher shrinkage resistance, dimensional stability, superior barrier properties as well as high-temperature stability, the polyethylene naphthalate (PEN) films are widely utilized in the packaging industry. PEN resins are being extensively used in the manufacturing of capacitors and magnetic storage devices and coating application in flexible electrical circuit boards. Moreover, the polyethylene naphthalate (PEN) is also being utilized for insulation applications due to their excellent dielectric insulation properties.

The Asia Pacific region is anticipated to grow the highest CAGR of 8.54% over the forecast period given the burgeoning demand for the packaged food and beverages, as well as having the world's largest electronics goods manufacturing capacities. The North America region held a significant share of global polyethylene

naphthalate (PEN) market in 2018. The factors such as growing demand for the PEN films from the packaging and electronics industry as well as increasing demand for the high performance tires were responsible for this increased market share.
Source: Plastemart.com

New bio-based epoxy resin for HP-RTM moulding processes

Sicomin has unveiled GreenPoxy 28 aimed specifically at the HP-RTM moulding processes used for both high-performance automotive structural parts and aesthetic interior carbon fibre components. As the automotive industry focuses on more sustainable manufacturing, Sicomin, a leading supplier of eco-resins, has announced a replacement for petroleum-based materials with the launch of its new bio-based epoxy resin aimed specifically for HP-RTM processing techniques. SR GreenPoxy 28 can be fully cured using a 2-minute cure cycle at 140 ℃, producing an onset Tg of 147 ℃, as well as exceptional mechanical properties under both dry and hot/wet test conditions.

SR GreenPoxy 28 is the sixth product to be added to Sicomin's renowned GreenPoxy range and is available with immediate effect in the industrial quantities typically required by automotive OEM's. "More and more manufacturers and suppliers are betting on bio-based alternatives derived from renewable raw materials. The latest addition to our GreenPoxy range, SR GreenPoxy 28, is an exciting alternative to traditional resins providing exceptional performance and quality for high volume programmes," commented Philippe Marcovich, President, Sicomin. Certified by Veritas, it is a fast cycle, low toxicity, third generation bio-based formulation aimed specifically at the HP-RTM moulding processes used for both high performance structural parts and aesthetic carbon fibre components. The new formulation has been optimised for fast production cycle times and superior mechanical performance.
Source: Plastemart.com

JV between China and Oman to build first polyethylene pipe factory in Oman

A ground-breaking ceremony was held at the Special Economic Zone of Duqm for building Oman's first factory to produce reinforced polyethylene pipes. The project is a Chinese-Omani partnership owned by Hongtong Duqm Pipes Company, which holds 51% stake, Blue Ocean International holds 44% and Daoud Alfarsi holds 5% stake.

Hongtong Duqm Pipes Company said in a statement that the construction work will begin this month in the special economic zone, 550 km south of the capital Muscat. The factory is expected to be completed in about 10 to 12 months, with actual production expected to start in Q3-2020.
Source: Plastemart.com

4 Plastics Industry Trends Predicted to Impact Manufacturers in 2019

Plastic Industry Trends 2019What does 2019 hold for the plastics industry? Several trends that emerged in 2018 continue to be refined and amplified heading into the new year:

1. BIORESINS AND ECO-FRIENDLY PLASTIC ADDITIVES

The environmental impact of traditional resins remains under close scrutiny, leading many manufacturers to reconsider their approach to selecting materials. Bioresins are gaining traction as alternatives since they're all based on natural plant and vegetable extracts or renewable resources, which aid in green practices through benefits such as safer disposal, energy-efficient manufacturing and decreased toxic emissions.

Along with developing plastic substitutes, solutions for making conventional thermoplastics biodegradable are coming to the fore. Prodegradant concentrates (PDCs) in the form of metal compounds, such as cobalt stearate or manganese stearate, are being added to plastic to promote oxidation and disintegration. In turn, the plastic breaks down into tiny fragments that microorganisms ingest and convert into carbon dioxide, water

and biomass, without the threat of harmful residues.

2. REINFORCED PLASTICS

The projected value of the global reinforced plastics market is projected to reach nearly $16 billion by the end of 2019. Perhaps most notably embraced by the automotive industry as substitutes for metal components, these carbon, glass, metal and graphite-reinforced plastics are gaining popularity in medical, military, construction and marine applications for their low weight, durability and design versatility.

3. 3D PRINTING AND PRODUCTION EFFICIENCIES

3D printing is improving many aspects of plastics manufacturing and remains a catalyst for reimagining options for plastic parts. While in some cases 3D printing is not a viable alternative to injection molding, advancements in the technology are leading to some impressive results with direct benefits for certain OEMs, including:

- New options for projects of 100-500 cycles, as less time is required to produce a part using 3D printing.
- More efficient production molds with printed-in conformal cooling channels that reduce cycle times without compromising part quality.
- Prototyping without hindering production; for certain applications a desktop polymer printer can produce a suitable prototype with functionality similar to one produced on the line.

4. AUTOMATION AND INDUSTRY 4.0

Automation is meeting the plastics industry demand for process simplification and cost savings. The advent of Industry 4.0 provides prime opportunities for further integration of robotic technologies and machine controls in order to:

- Make cycles faster, facilitate maintenance and simplify programming.
- Use automated cells with multiple downstream operations integrated beside the press.
- Substitute traditional pneumatics for “collaborative” robotic initiatives — meaning those with multiple, axis-jointed arms, servo wrists and advanced safety features — for faster, more precise programming on the line to aid in all facets of production, saving time and increasing throughput.

Understanding how the plastics industry is evolving helps manufacturers capitalize on trends, as does partnering with an experienced injection molder to assist in implementing solutions that help ensure end products perform as intended.
Source: Kaysun.com

Amid growing demand from packaging, global extrusion coatings market to reach US$5.8 bn by 2026

The global extrusion coatings market is expected to reach US$ 5.80 Bn by 2026 at a CAGR of about 5 % during a forecast period, as per Trendsmarketresearch.com.

The growing demand for extrusion coating in the packaging industries is anticipated to drive the extrusion coating market. The demand for the extrusion coating market is indomitable by the growing population in the developing economies such as China, India in the Asia-Pacific region. The usage of extrusion coating of in cosmetic products, as well as the foods & beverages sectors, are boosting the growth in extrusion coating market. High cost as compared to other coating material hamper the growth in extrusion coating market.

Based on the material type, extrusion coatings market is classified into Polypropylene, Ethylene Vinyl Acetate, and Low-Density Polyethylene. Low-Density Polyethylene is expected to grow at the high level of CAGR during forecast year. LDPE offers the feature such as higher melt strength and superior optical properties in comparison with other linear polyethylene. It has the ability of the sealability properties and good moisture barrier hence it is used in the array of applications such as liquid packaging, folding carton, and food packaging. It is unaffected to moisture, chemicals, impact.
Source: Plastemart.com

Asahi Kasei develops world’s first Polyamide beads foam for lightweight and noise reducing automotive applications

The Tokyo headquartered Asahi Kasei Corporation, a globally active diversified technology company with op-

erations in the material, homes, and health care business announces the development of the PA Foam, a foam bead material based on polyamide – the first of its kind worldwide. This foam bead is considered to be perfect for noise reduction and lightweight applications in the automotive industry. The company is one of only four fully integrated polyamide manufacturers worldwide and is able to produce PA 6.6 completely from monomer to compound.

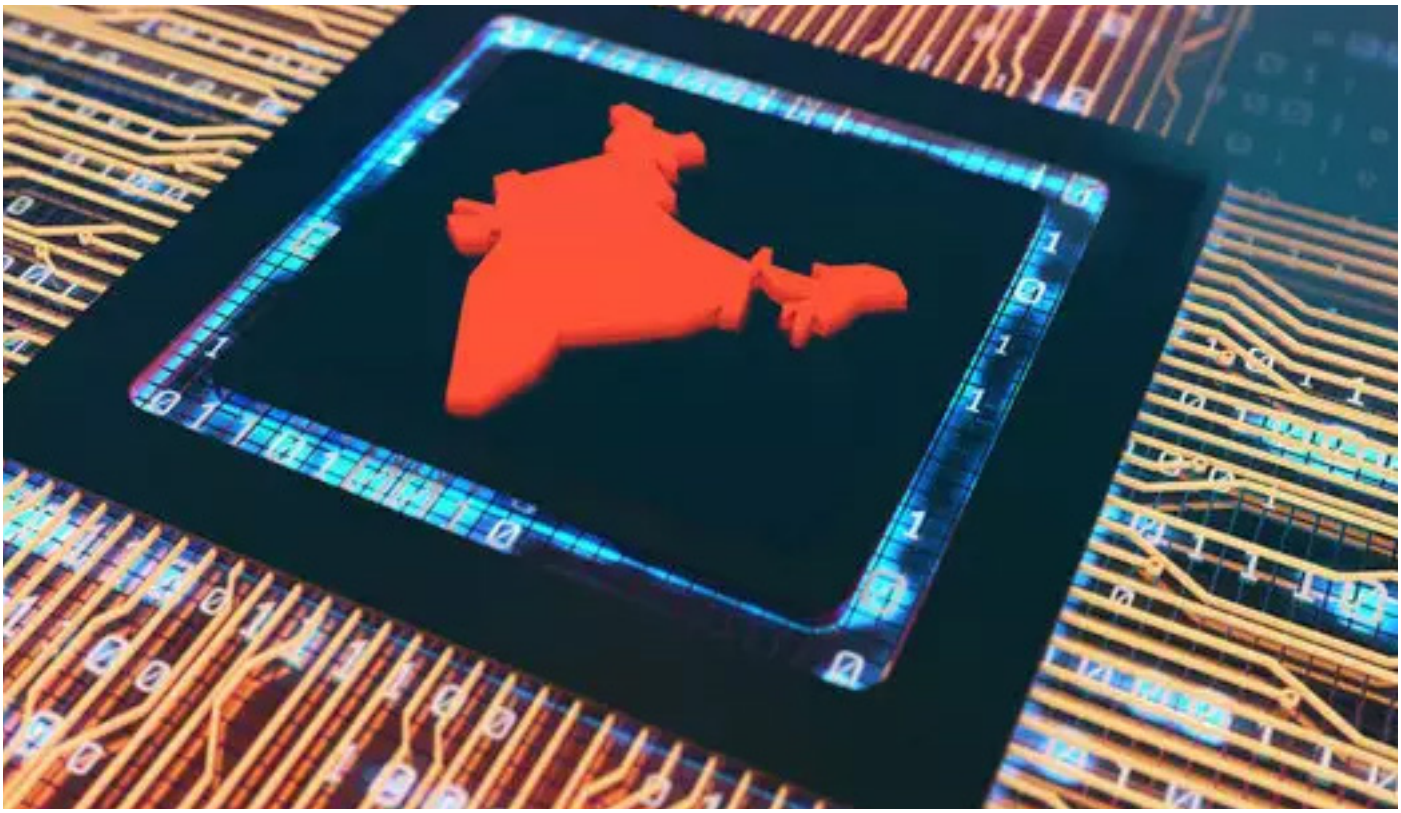
With this product, Asahi Kasei is able to successfully offer solutions for various challenges in the automotive industry including stiffness, mechanical strength and heat resistance for use in structural lightweight applications of cars and noise reduction.

Explaining about the unprecedented high heat resistance and other properties of the PA Foam, Takauji Namatame, Senior Manager of the Corporate R&D Division at Asahi Kasei Europe says, “In Europe, where environmental awareness is strong, the need for lightweight applications is expected to further increase in the future, especially in the automotive industry. Our foam opens new doors for applications, which at the same time require lightweight and heat resistance.” The noise reduction properties resulting from the special shape of the beads will meet the growing demand regarding applications that reduce noise, vibration and harshness (NVH), added Takauji.

The PA Foam comes with various properties of polyamide like resistance to heat, chemical, and oil besides having significant rigidity or noise-reducing quality – depending on the shape of the beads. The PA Foam that consists of round-shaped beads has a strong rigidity, making it a promising alternative material for aluminum and metal in structural applications and for use in insulators, ducts, spacers or other lightweight parts of the battery case of electrified vehicles.

In addition to the typical polyamide properties, the C-or macaroni-shaped PA Foam provides noise insulation. The possible applications can be found everywhere around the car especially the engine compartment, where the material can unfold its unique qualities. It can also be used for engine covers to make them lightweight, significantly reduce the radiating engine noise to make the car quieter and increase the level of comfort inside the car. The PA Foam can significantly contribute to the quality of this new in-vehicle living space by not only insulating or reducing the noise radiating from the car but also reduce noise coming from the outside. In addition to the roof and bonnet, other possible applications could be the seat and floor structure of the car.

Foam beads made of polyamide can be processed in a steam molding process on standard polystyrene molding equipment. Additionally, a significant reduction of resin for the production process can be achieved, contributing to an overall cost reduction. Asahi Kasei will present the PA Foam at the FOAM EXPO Europe, scheduled to be held between 10 and 12 September 2019 in Stuttgart, Germany.
Source:plasticsinsight.com



India News

Jay Elastomers Pvt Ltd. Receives the prestigious India SME 100 Award

On 22nd June 2019, Jay Elastomers Pvt Ltd received the prestigious India SME 100 award for its innovation in the recycling of manufacturing waste to produce Tiles, Construction worthy bricks, Shock absorbing pads and Fenders. The award was received by Mr. Jayant Khadilkar, MD, Jay Elastomers, from the Hon'ble Minister of Road Transport and Highways and Micro, Small and Medium Enterprises, Shri. Nitin Gadkari, at an award ceremony held in New Delhi. Also present amongst the distinguished guests was the Hon'ble the Minister of State for Animal Husbandry, Dairying and Fisheries and MSME, Shri. Pratap Chandra Sarangi.

In line with the strategy of India SME Forum and to groom promising SMEs, the India SME 100 Award acts as a catalyst to identify such SMEs and recognise them for eventually becoming large globally oriented companies. Aimed at recognizing the contribution and performance of India's top performing SMEs, the awards also aim to generate awareness of the importance of the role played by the SME sector in the development of the country's economy, encourage sharing of best practices in management, provide networking opportunities to SMEs, raise capital and provide a development path for the continuous growth of the segment, and more.

India SME 100 is India's most prestigious annual awards initiative for Small and Medium Enterprises where TOP 100 SMEs across industry sectors are chosen by a very eminent Jury from around 40000+ nominations on the basis of their overall performance in the categories of Growth, Financial Strength, Innovation, International Outlook, Corporate Governance and People capital.

Speaking about the award, Mr. Jayant Khadilkar said, "It is indeed an honour for us to receive this meritorious award. Recycling of plastics and reducing environmental damage is a collective responsibility for all stakeholders. However, on our part as manufacturers, we have been working towards doing our best in waste management and recycling of waste generated by industries. We have made suggestions to the MSME Ministry to support our cause and facilitate the setting up of recycling units in manufacturing clusters by providing us with dedicated

space such as unused or abandoned plots, etc. Such a system has been successfully implemented by the Chemical industry in China and we firmly believe that with the right infrastructural support, our industry can go a long way in creating a sustainable plastics economy and safer environment."

"Most of local municipal bodies have no technical expertise to process Rubber, polymer, electronic waste at even primary level. However, industry veterans, educational institutions, laboratories, etc could be play an integral role in creating greater awareness and offer workable solutions to ensure a legacy of safe, equally fresh environment to next generation", he concluded.

In recognition of the efforts undertaken by Jay Elastomers Pvt Ltd towards boosting a circular economy and sustainability efforts, the company has received several awards including the SKOCH-NSE Gold MSME Excellence award in March 2019, followed by "Industry Innovation Award" at 28th International Conference of the International Association for Management of Technology USA, AT NITIE, Powai on "Managing Technology for Inclusive and Sustainable Growth". Indian Polyurethane Association has also Awarded Mr. Jayant Khadilkar's efforts in waste management technique developed for Polyurethane waste. He has also been honored as Keynote speaker at the 2nd Global Summit at the Tokyo Recycling Conference 2019 held in Tokyo, Japan on 22nd July 2019.

Indian Envoy highlights potential offered by Indian Plastics industry

The Indian High Commissioner in Sri Lanka Taranjit Singh Sandhu on Friday pointed out the potentials offered by the Indian plastics industry in terms of raw material, capacity, infrastructure and skilled manpower.

He was speaking at the inauguration of the 6th Edition of COMPLAST (Complete Plastic Exhibition), the 3rd Edition of International Rubber Expo and the 4th Edition of COMEXPO (Complete Manufacturing Expo), here on Friday.

High Commissioner Sandhu noted that the large participation of Indian companies in the recent Exhibitions is a reflection of India's solidarity with Sri Lanka during difficult times. He spoke about the potential offered by Indian plastics industry in terms of raw material base, capacity, infrastructure and skilled manpower. The envoy pointed out the need to address the issue of plastic waste so as to ensure environmentally sustainable growth.
Around 35 exhibitors from India are participating in the Exhibition. The companies are supported by PLEXCONCIL and Ministry of Commerce, Government of India.

P.L.U. Rathnamalala Director General, Industrial Development Board of Sri Lanka, Kaushal Rajapaksa, President, Plastics & Rubber Institute of Sri Lanka, B. Swaminathan, President and CEO, Smart Expos, India representatives from Plastics Export Promotion Council of India – (PLEXCONCIL) and other dignitaries were also present.
Source:newsin.asia

Sintex to sell overseas business to consortium of PE investors

Sintex group, known for its Sintex branded water tanks, has agreed to sell its overseas business to a consortium of private equity investors as part of efforts to pare debt and repay lenders. Sintex Plastics Technology, the arm of the group engaged in manufacturing of water storage tanks and other building products and solutions, has entered into a definitive agreement to sell its European subsidiary Sintex NP SAS to Xtech Invest SAS for a consideration of €155 million. The transaction is expected close by 31 October. Xtech is owned by private equity investors Siparex, Crédit Agricole Régions Investissement, BNP Paribas Developpement and AfricInvest.

The sale of the European unit comes at a time when the Indian economy is experiencing a slowdown and tight liquidity conditions in the non-bank sector leading to pressure on borrowers as they struggle to refinance or

raise fresh debt. In June, Sintex Industries, the textile and yarn business of the group, defaulted on interest payments on non-convertible debentures (NCD) worth ₹86 crore. The default by Sintex followed the company reporting a massive drop in profit to ₹21.5 crore in the year ended 31 March from ₹141.8 crore in the previous year. Sintex's net debt also increased to ₹5,871 crore in FY19, from ₹5,294 crore in FY18.

With the group having signed an agreement to sell the overseas business, the focus will now be to reduce group level debt and ensure better capital allocation to its domestic businesses. "This divestment is part of our overall strategy to reduce debt at a consolidated level and to ensure that the domestic business gets adequately funded," Amit Patel, managing director of Sintex Plastics. "Along with the efforts to reduce the debt through the sale of non-core businesses, we are taking significant corrective steps to improve the domestic business of the company," he added.
Source: livemint.com

Saudi Aramco to make big investment in Reliance petrochemicals

Global oil giant Saudi Aramco plans to invest $15 billion in a Reliance Industries Ltd. unit that includes one of the world's largest polypropylene businesses. State-owned Saudi Aramco, based in Riyadh, Saudi Arabia, has signed a non-binding letter of intent to acquire a 20 percent stake in the Oil to Chemicals (O2C) unit of Mumbai-based Reliance, officials said in an Aug. 12 news release. The O2C unit is valued at $75 billion.

The businesses of O2C include refining, fuels marketing and petrochemicals. The petrochemicals part of the business includes major PP resin operations, as well as production of polyethylene, PVC, PE pipe, PET bottle resin, polyester staple fiber and yarn, elastomers and composites.

Officials said in the release that Saudi Aramco's investment would be one of the largest foreign investments ever made in India. Saudi Aramco has supplied Reliance with crude oil for more than 25 years. Officials added that Saudi Aramco is the world's largest and lowest cost-per-barrel producer of crude oil, and is geographically close to India. The firm also offers a wide range of crude supply options.

Reliance's Jamnagar refinery — which officials said is the largest and most complex refinery in the world — includes petrochemical production at multiple manufacturing sites. Under the proposed investment, Saudi Aramco would supply Arabian crude oil to the Jamnagar refinery on a long-term basis.

"We have a long-standing crude oil relationship with Saudi Aramco and we would be happy to see this further strengthened with this investment," Reliance Chairman and Managing Director Mukesh Ambani said in the release. "Saudi Aramco's interest is a strong endorsement of the quality of our assets and operations as well as of the potential of India."

The proposed deal is subject to due diligence. A definitive agreement will be subject to regulatory and other customary approvals, officials said. No timeline for completion of the deal was cited in the release.

Reliance ranks as India's largest private sector company, with annual sales of just over $90 billion. The firm's businesses include hydrocarbon exploration and production, petroleum refining and marketing, petrochemicals and retail and digital services. Saudi Aramco ranks as one of the world's largest businesses, with sales of almost $356 billion in 2018. In March, the firm paid a little more than $69 billion for a 70 percent stake in global commodity and engineering resins supplier Saudi Basic Industries Corp. Saudi Aramco also has partnered with Dow Inc. on the Sadara plastics and petrochemicals joint venture in Saudi Arabia.

WACKER opens technical centre for tile-adhesive applications in Bengaluru

Munich-based chemical company WACKER is strengthening its presence in India by opening a technical centre in Bengaluru. Located in the south of the country, it will serve as a regional competence centre for tile-adhesive applications. Continuing growth in the Indian construction sector is driving demand for personally tailored solutions for tile adhesives. The new technical centre enables WACKER to provide its customers in the local area with even better support in developing innovative solutions.

Although the global economy is slowing, growth in India is continuing to gain momentum, mainly due to the booming construction industry. A recent study forecasts

that this South Asian country is set to become the world's third largest construction market by 2025. Some 11.5 million houses will be built there every year. Demand for construction products and applications catering to the Indian market is rising at a correspondingly fast rate. "The Bengaluru technical centre is another important milestone in our growth strategy for India," said Andreas Collignon, head of the business unit Construction Polymers at WACKER. He added that the objective was to meet the individual needs of customers locally – especially in South India – and to support and test new applications. "Our technical centre sets new standards for service, consulting and knowledge transfer, enabling us to offer our customers and partners considerable added value," explained Anand Gopaladesikan, who heads WACKER India, during the opening ceremony. "Our goal is to contribute to the accelerated development of the tile adhesives market in India."

The technical centre in Bengaluru specialises in the development of customised tile-adhesive applications. Adhesive strength and flexibility are vital for tile-adhesive formulations. WACKER's polymeric binders improve how tiles adhere to the substrate, while permitting flexibility within the adhesive – an effective way of preventing cracks and breakage. WACKER markets its dispersible polymer powder formulations under various brands, such as VINNAPAS, VINNACEL and ETONIS. These powders make the adhesive highly water-resistant and extremely easy to process. What is more, formulations containing WACKER's polymer powders permit the use of special installation techniques, known as thin-bed technology. This makes significant savings possible in terms of raw materials, such as cement or sand, the latter being a key raw material in the construction sector. The global construction boom means that sand is becoming increasingly scarce.

Like its counterpart in Mumbai, the new technical centre in Bengaluru adjoins a WACKER ACADEMY training centre, the purpose of which is to intensify knowledge transfer in the local market. WACKER ACADEMY courses cater to the specific needs of India's construction-chemicals industry and give customers and business partners an opportunity to learn about all relevant aspects of tile-adhesive applications. Close proximity to the applications labs promotes a lively exchange of expertise and creates an optimal environment for customer service. WACKER ACADEMY provides an ideal, industry-specific platform for networking among customers, distribution partners and WACKER specialists.
Source: manufacturingtodayindia.com

Sidel expands geographically by opening new office in Gurugram, India

Italy headquartered Sidel, a leading provider of equipment, services and complete solutions for packaging liquids, foods, home, and personal care products in PET, cans, glass and other materials expand its footprints in India by opening a new office at Gurugram, near country's capital city of Delhi.

This expansion strategy marks Sidel's commitment to the Indian market. Rohit Sawhney, Sales Director India, and Indian subcontinent at Sidel says, "this office opening is a symbol of our commitment and trust in the Indian market, our customers and of course our best asset – our people – the very reason we are able to continue to succeed in this growing market."

"India is an important market for Sidel and one we will continue to invest here. We are proud to have a major presence in the country with a state-of-the-art office in a great location," adds Rohit. Talking about opening the office at Gurugram, Rohit says, "The new premise allows us to be closer to our customers and partners in the area, alongside major players in the technology and beverage industries." Gurugram is well connected in terms of transport links due to the nearby metro stations, besides having easy access to the expressway, making it a prime location for Sidel's new India hub.

It is important to note that Sidel is able to leverage a long-standing presence in the Indian market as it opened its first office in Mumbai in 1996 and a second office and factory at Pune in 2001 to enlarge its footprint and expand its offering to local businesses. Earlier this year (2019), the company also inaugurated its research and development (R&D) unit at Pune, opening the door to further opportunities for building strong innovation and development skills in the region. Over the last 23 years of its presence in India, the company has acquired over 350 customers throughout the region across the various industry sectors that it serves. It has sold more than 2,600 pieces of packaging equipment to manufacturers active in India.

Talking about the Indian market, Giulio Bellanti, Director of Sales for Food, Home and Personal Care for the Middle East, Africa and India at Sidel, explains, "Regarding the markets we serve, I clearly see a positive trajectory in India." Guilio further elaborated that the company's long-standing packaging expertise is increasingly proving key to win preference from local converters, active in the beverage as well as in the food, home, and personal care categories.

Sidel, one of three industry groups of Tetra Laval is a leading provider of equipment and services solutions-for packaging beverage, food, home, and personal care products. Sidel has over 170 years of experience with proven expertise in blowing, filling, labeling, material-handling, end-of-line and line-engineering solutions, including an innovative focus on the factory of tomorrow with advanced systems.
Source: plasticsinsight.com

Plastic shipments to India stall as ban draws near-

Recovered plastic has largely stopped flowing from the U.S. into India, which until recently has been among the top importers of the material. The curtailment in material movement comes as the South Asian country prepares to implement an all-out ban on scrap plastic imports this month.

The Indian government in March announced its plan to ban scrap plastic imports, later indicating the ban would take effect Aug. 31. The ban is proposed to cover most plastics under the 3915 tariff code, including PET, PE, PP, PS and more.

The announcement sent shockwaves through the industry, because India is a major destination for U.S. material. The country was the second largest importer of U.S. scrap plastic during the first six months of 2019, bringing in 156 million pounds. June is the most recent month for which trade figures are available. Since that highly publicized initial announcement and a subsequent clarification of the implementation date, there has been little news of the plastic ban. But in the intervening months there have been numerous indications the ban is still set to take effect later this month. Meanwhile, scrap plastic traders say the movement of material to India has stopped in preparation for the new restriction.

"There has been no change in the stance," said Rakesh Surana of scrap plastics brokerage Gemini Corporation N.V. "Because of this, all the exports out of U.S.A. or Europe to India of plastic scrap have come to a standstill," because it takes between 30 and 45 days for containers to reach India.
Stakeholders adjust for end-of-August ban

In May, the Indian government continued to stress its upcoming plastics policy changes. In a press release describing the Indian delegation's activities at the Basel Convention meeting in Geneva, the Indian Ministry of Environment, Forest and Climate Change praised the Basel countries for expanding regulations on global scrap plastic shipments. The Indian delegation was involved in negotiating the agreement to amend the Convention, the release stated.

"India has already imposed a complete prohibition of import of solid plastic waste into the country," the release added, referencing the upcoming ban. In June, shipping companies began to make adjustments as the Aug. 31 enforcement date came on the horizon. APL stopped accepting loads of scrap plastic moving from any country to India. Hapag-Lloyd issued an alert reiterating the Indian policy changes. The company announced that it would cut off shipments of "solid plastic waste" into India after July 10.

Sources told Resource Recycling the policy is still slated for an end-of-August implementation date. Scrap plastic shippers have received instruction that containers should reach the Indian ports by Aug. 20 at the latest,

Surana of Gemini Corporation said, to enable the shipments to clear customs before Aug. 31. As the ban approaches and shippers adjust accordingly, several key elements of the Indian policy remain unclear. Scrap plastic traders say it's not certain whether post-industrial plastics or clean regrind will be banned, or whether the restriction is only covering baled, post-consumer material.

India joins a growing regulatory movement

Over the past year and a half – the time since China's scrap plastic import ban took effect – countries across Southeast Asia have enacted various restrictions on recycled plastic coming into their countries. And more recently, a growing number of these countries are shipping inbound plastic back to its source, which is frequently North America.

Although each Southeast Asian nation's import restrictions have been slightly different, they are driven primarily by skyrocketing plastic import volumes that followed China's ban. The influx of material has led to greater attention to contamination, particularly when the importing country does not have adequate infrastructure to dispose of that contamination. These issues have built significant public pressure on governments to take action.

Source: resource-recycling.com

Russian Federation

Economic overview

The Russian Federation (Russia) is the largest country in the world, having a land mass that stretches from Europe to the Northern Pacific Ocean. The country enjoys fiscal surplus across all tiers of government and low external debt levels. Russian economy draws its strength from vast natural resources – crude oil, natural gas, coal, many strategic minerals and timber. However, in the recent times, certain niche industries, like information technology and telecommunications, have also experienced significant growth.

As of August 21, 2019, the S&P's rating for Russia is BBB-; Moody's rating stands at Baa3; and Fitch has a reported rating of BBB.

Russia has FTAs with Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Serbia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan and Vietnam.

Recently, the Hon'ble Commerce and Industry Minister of India, Shri Piyush Goyal, led a high-powered delegation to Russia to explore opportunities to enhance trade and investment from India to the Far East region of Russia. In the plenary session attended by 400+ delegates, the Hon'ble Commerce Minister of India and the Deputy Prime Minister of Russia, Mr. Yuri Trutnev, underlined the need to diversify and deepen trade links in priority sectors, in order to meet the trade target of USD 30 billion by 2025.

Economic indicators		2016	2017	2018
Nominal GDP	USD Billion	1,283	1,578	1,631
Nominal GDP per capita	USD	8,910	10,962	11,327
Real GDP growth	%	0.3	1.6	2.3
Total population	Million	144.0	144.0	144.0
Average inflation	%	7.1	3.7	2.9
Total merchandise exports	USD Billion	285.5	359.2	449.3
Total merchandise imports	USD Billion	182.3	228.2	238.2

Source: IMF, TradeMap

Trade overview

Russia has been a longstanding and time-tested partner for India, and engaged in bilateral merchandise trade worth USD 9.16 billion in 2018. During the year, India's exports to Russia were valued at USD 2.31 billion in comparison to India's imports worth USD 6.85 billion resulting in a trade deficit of USD 4.54 billion to India.

Within plastics, India's exports to Russia stood at USD 62 million in 2018 in comparison to India's imports worth USD 130 million from Russia during the same year.

India's plastics exports to Russia largely comprise of:

- Plastic sheets, films, plates etc. (36.0%)
- All types of optical items (15.1%)
- Raw materials (10.6%)
- Writing Instruments (5.9%)

Russia's annual plastics imports are valued between USD 13-15 billion. Its plastic imports are largely catered to, by China (26.6%), Germany (14.9%), Belarus (5.5%), South Korea (4.8%), and United States (4.5%). India meets just 0.7% of all plastics imports of Russia. Nonetheless, India has a good standing in some of the plastics product imports by Russia:

- Writing instruments – Market share of 8.4% (Rank 3)
- Ropes, twines and cordage – Market share of 6.2% share (Rank 5)
- Woven sacks / FIBC – Market share of 4.8% share (Rank 5)
- Nets – Market share of 4.3% share (Rank 8)
- Brushes – Market share of 3.8% share (Rank 5)

M.V. Sivaraman, Executive Director, Maris Associates

Russia is a major trading partner for India amongst the CIS countries and India has always enjoyed good bilateral relations with them. As a market, there is a huge export potential for packaging, despite stiff competition from countries such as China and Vietnam. Being landlocked to India, exporters typically do face logistical challenges, while language barriers and extensive formalities that delay release of consignments is something that we often face in our exports of FIBC products. Continuation of schemes such as MEIS would be of immense support to exporters in capturing the trade potential that the country has to offer.

Product Category	Russia's import from India	Russia's import from world	India's export to world	Trade potential for India
	USD Million	USD Million	USD Million	USD Million
Plastic raw materials	10.53	4,595.17	4,498.11	1,946.41
Plastic sheets, films, plates etc	23.57	1,684.95	1,344.62	776.64
Other moulded and extruded items	5.93	1,539.78	619.88	598.64
Medical disposables	3.22	1,248.32	534.33	448.51
Packaging items	0.87	435.88	743.21	315.86
Travel ware	2.89	207.47	369.73	204.58
Electrical items	3.31	624.73	182.04	178.73
All types of optical items	10.45	445.84	470.52	146.32
Houseware	1.02	263.28	181.06	136.79
Pipes, tubes, hoses etc.	1.04	556.44	188.12	118.48

Source: TradeMap, Plexconcil Research

Trade potential

Our internal research indicates that India's plastics exports to Russia has the potential to grow to USD 5.6 billion. Product categories, within plastics, that have immense export potential to Russia include:

One of the key obstacles faced by companies penetrating the Russian market is a vastly different business culture and etiquette from that of Western Europe. It is necessary to spend time getting to know your customers and business partners and personal relations are vital to build up trust. Obtaining prior market research data and due diligence is also essential to decide how you will sell to Russia, whether direct or through agents or distributors. Language barriers makes dealing most challenging and contacting Russian trade associations can be helpful to exporters. Sometimes joint-ventures with Russian companies are the best way of proceeding. While Russia can be quite a challenging market, for the determined businesses, it can be quite lucrative.

Industry Speak

Interview with Prasan Lohia, Director, Merino Industries Ltd., Regional Chairman – Eastern Region, Plexconcil

In your experience, how is easy or challenging is doing business with Russia?

Doing business in Russia can be easy only if you have the right partner who can push the product. Given the proximity to Turkey and Europe, the Russians prefer to buy from these regions as they do not have to stock inventories and even LCL delivery is faster. Besides most Government projects involve the construction industry and, in this segment, they do not favour foreign players and promote domestic production.

What category of Plastics products have a high demand in Russia?

In our line of business, plastics with size 1320 X 3050 and 1550 X 3660 is the preferred size with 0.6 and 0.7 mm thickness. Demand for speciality laminates for worktops in 1 mm have high demand as well.

What, in your opinion, is the export potential for Plastics in Russia?

The Russian economy, today is at a near standstill. From 2014 to 2018, the country's GDP grew by just 1.85% – or 0.4%, on average, each year and the economy has not been favorable since last 4 years now. With sanctions against Russia by western countries, thousands of the companies shutting down have resulted in lowered investment and capital flight. This has also impacted Russian imports and thus, exports to from other countries catering to this market.

Who are the major competitors to Indian exporters?

Major competition in our segment is from mostly from local players such as Melatone, Arpa, Wilsonart, Formica who have been in the market for decades now.

5. What are the typical challenges faced by Indian exporters engaged in trade with Russia?

- Logistics is one of the major challenges that we face. Being very far and nearly landlocked, the time taken for products to reach is too long.
- Money transfer is a challenge as European banks have to be involved since most companies do not engage in direct transactions due to local government banking restrictions.
- As an outsider you cannot participate in Government tenders. Normally Government projects are the biggest in Russia.
- Apart from standard HPL, a lot of Russian certifications are necessary.
- Language is a huge barrier in approaching customers as well as getting responses back from them.
- Obtaining even Business visas and travelling within country without local support is difficult.

6. What measures/ incentives/ policies, do you believe, will help boost Indian exports to Russia?

Higher incentive bracket in MEIS and other transport incentives and infrastructural options would be a boost to trading with Russia.

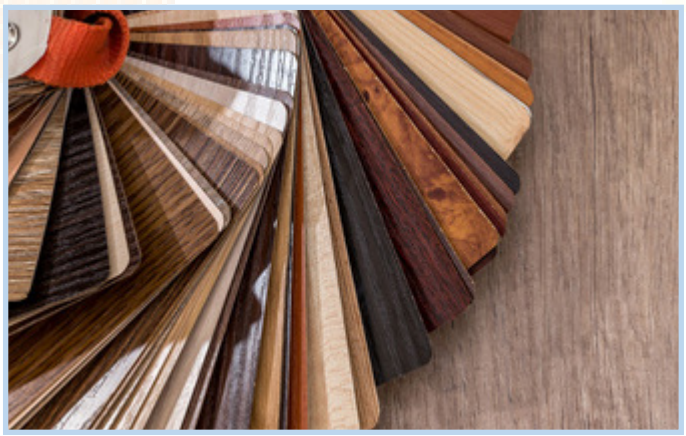
Industry Speak

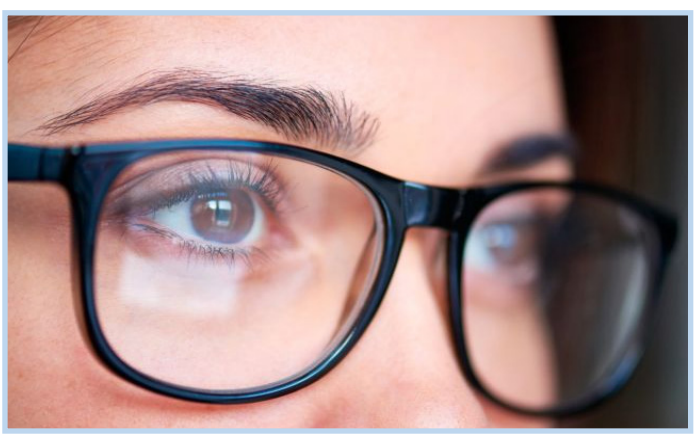
Lokesh Dutt, Sr. Vice President – Exports, Greenlam Industries

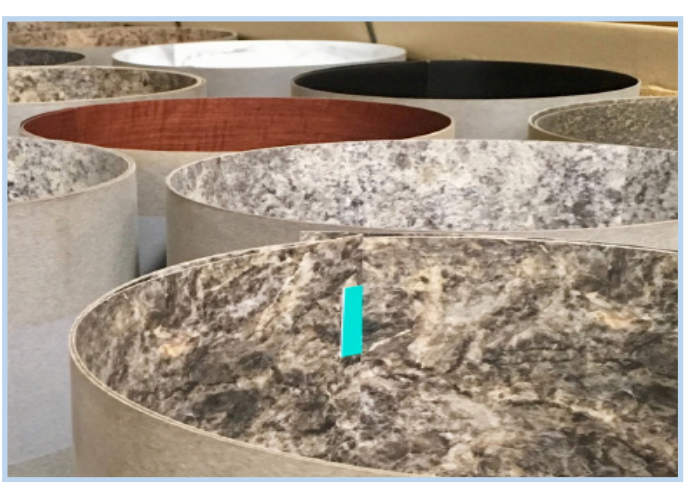
Indian manufactured laminates are much recognized for the quality as well as their competitive pricing in Russia. In fact, it may well be said that the quality of our products is on par with European standards and within the HPL segment, we foresee immense potential for especially exterior laminates. Majority of the products of this segment are imported from Turkey, Italy and Germany given their close pro

imity to Russia and considering the ease of connectivity. These countries are also major competitors for Indian exporters as local manufacturers, currently, manufacture only basic products. Given the limited product range manufactured locally, most premium laminates are imported.

While the export potential to Russia is encouraging, doing business in Russia is not easy. Language is a major challenge followed by long transit time from India. While it typically takes at least 6-7 weeks for Indian consignments to reach Russia, European suppliers can achieve the same in less than half that time period. Laborious documentation, high import duties on Indian goods and lack of opportunities to appoint local distributors or channel partners are also challenges faced by exporters. Russia also has stringent requirement for every consignment to have clearance from the Environment & Fire Departments. These are required to be further certified by the local authorities in Russia as they do not recognize Indian certification. Not only does this add to our costs, but once again, makes documentation process quite tedious. Trade agreements and greater trade cooperation between our countries, infrastructural and logistical alternatives are necessary to mitigate at least some of these challenges and aid export growth to Russia.







ECB, a natural hedge to future exports – Myth or Reality?

By Maulik R Shah, Co-Founder & CEO,
Almus Risk Consulting
FX Advisory | Consulting | Outsourcing

Consider this:

- Prevailing exchange rate is 70 & what if you are compelled to price for export quotation at 65 instead of 70?
- Will you be competitive in market place?
- Do you lose a business or take a business loss?

Above is true incident faced by an exporter who borrowed ECB in Dollars last year in March 2018 (when rate was 65) and treated it as hedge against future exports (instead of managing risk of ECB).

"ECB a natural hedge against your future exports" is one of the myths of the modern world.

Over last few years, there has been a rush to borrow in foreign currency attracted by negative or low LIBOR / EURIBOR. Corporates conveniently (or out of negligence) ignored hedging cost, on the assumption that future exports are a natural hedge against these liabilities and therefore do not need hedging & incur cost. This article explains why this is a myth. It also highlights why still it's recommended to avail ECB in the same currency of exports.

Let's look at key features of ECB:

1. It is generally availed for longer terms, i.e 3-5 years or even longer than 5 years.
2. It is the source of debt capital and impacts P&L for longer period. It is an alternate source than local borrowing.
3. The end use of ECB is usually for meeting project expenditure, expansion plan etc.
4. The objective of ECB is to minimise the cost of finance.

Let's look at key features of trade exports:

1. Lifecycle of trade exports (order to realisation time) is generally based on working capital cycle of the company and can range from 1-2 months to 8-9 months. But less than 1 year. So by and large trade exports are short term in nature. The impact of this transactions in P&L is within the same year or maximum in next year.
2. Price can be fixed for a duration, say a year or it can be changed every quarter or with every new export order. That creates a dynamic pricing which is subject to change based on new market condition including exchange rate (adoptable to the new reality)
3. The objective of hedging is to protect EBIDTA / PBT

Each of these objectives (under both above) are mutu-

ally exclusive, may be complimenting but definitely not inclusive in nature. One big difference is the timing of the exposure (short term v/s long term). By treating it as hedge against each other, we create another big risk of asset liability mismatch. As explained in above example, ECB availed for 5 years if hedged against future exports expected in next 5 years, is equal to selling those exports in advance at today's exchange rate. Now let's look at both exposures separately and examine hedging requirement considering the peculiarity of both exposures.

ECB hedging

The initiating criteria for ECB is "availing finance at the most competitive rates". With that as the larger context, management of FX risk needs to be driven by "single objective" of minimising cost of finance that includes hedging cost. Various instruments like Currency Swaps, Interest Rate Swaps are available and can be used for hedging interest rates (floating / fixed) and currency rates. The key tool to monitor would be effective interest rates (effective cost of finance). Any Corporate Treasury, planning to raise ECB has to justify at the end of the tenure, how much effective cost saving is crystallised by borrowing in foreign currency.

Checklist for ECB hedging

1. Check the regulatory guideline - RBI guideline for raising ECB and for managing risk of ECB
2. Frame ECB risk management policy. Most of the corporates avail loan and keep it unhedged without any policy directive. Please note that any exposure that remains unhedged must have risk capital defined in the policy. We have seen effective cost of finance reaching abnormal level of even 30% + especially when EURINR moved up from 70 to 90 and USDINR moved up from 53 to 68 during 2012-13. Even as recent as last year, USDINR moved up from 65 to 74 and that has impacted cost of dollar ECB. Policy guideline will provide the required trigger for treasury to take corrective actions instead of relying on "hope and faith".
3. Check "hedging infrastructure" i.e. long term credit limits availability with banks and ISDA agreements
4. Carry out credit check on your banks. Banks financial health is critical since hedges will be for a long period and for all hedges that are "in the money", client run a risk on the bank for honoring those hedges (though underlying loan offsets that risk)

<u>Trade exports hedging</u>

Principle of hedging - it offers protection to businesses for the time that businesses take to adopt to the new reality / market conditions. Eventually businesses have to adjust. Hence, financial hedging is just an interim measure.

Checklist for trade export related hedging

1. Frame risk management policy
2. Identify the trigger for exposure (event date) and duration of the exposure
3. Manage exposure within the policy guidelines
4. Measure the performance
5. Define role & responsibility

Let me now make a "paradoxical" statement. The above note clearly states that ECB cannot be a natural hedge against future exports. Yet, it is highly recommended to borrow in the same currency of export while availing ECB. Although this does not act as natural hedge, it does provide effective risk mitigation as explained below.

Case study

Indian company ABC exports in Euro. It competes with local European manufacturers. In 2013, EURINR depreciated by 25% in just 6 months (92 in August 2013 to 69 in March 2014). This makes ABC uncompetitive in the market place. 25% price adjustment or 25% productivity and efficiency improvement in just 6 months is near impossible. Luckily for ABC, it had availed ECB loan in Euro. How did that help?

- *25% depreciation in EURINR helped ABC to create some reserve. It reduced its long-term liability. Such a huge depreciation in such short time created the much needed reserve for ABC.*
- *ABC couldn't increase Euro price at the prevailing depreciated rate (which was loss making), but its capital reserve acted like a parachute during plane crash.*
- *ABC develops a long-term strategy on its competitiveness taking into account new market conditions including the 25% depreciation of EURINR. But as ABC builds its strategy, ECB in the same currency gives it time to sail through volatile times*

ECB being long term in nature has a strategic impact on the business whereas trade exports being short term in nature have tactical impact on business. Borrowing in the same export currency acts as a risk mitigation tool between strategy and tactical position. At the same time, separate hedging strategy (and not natural hedge), with well defined objective, is imperative for managing risk on ECB and trade exports.

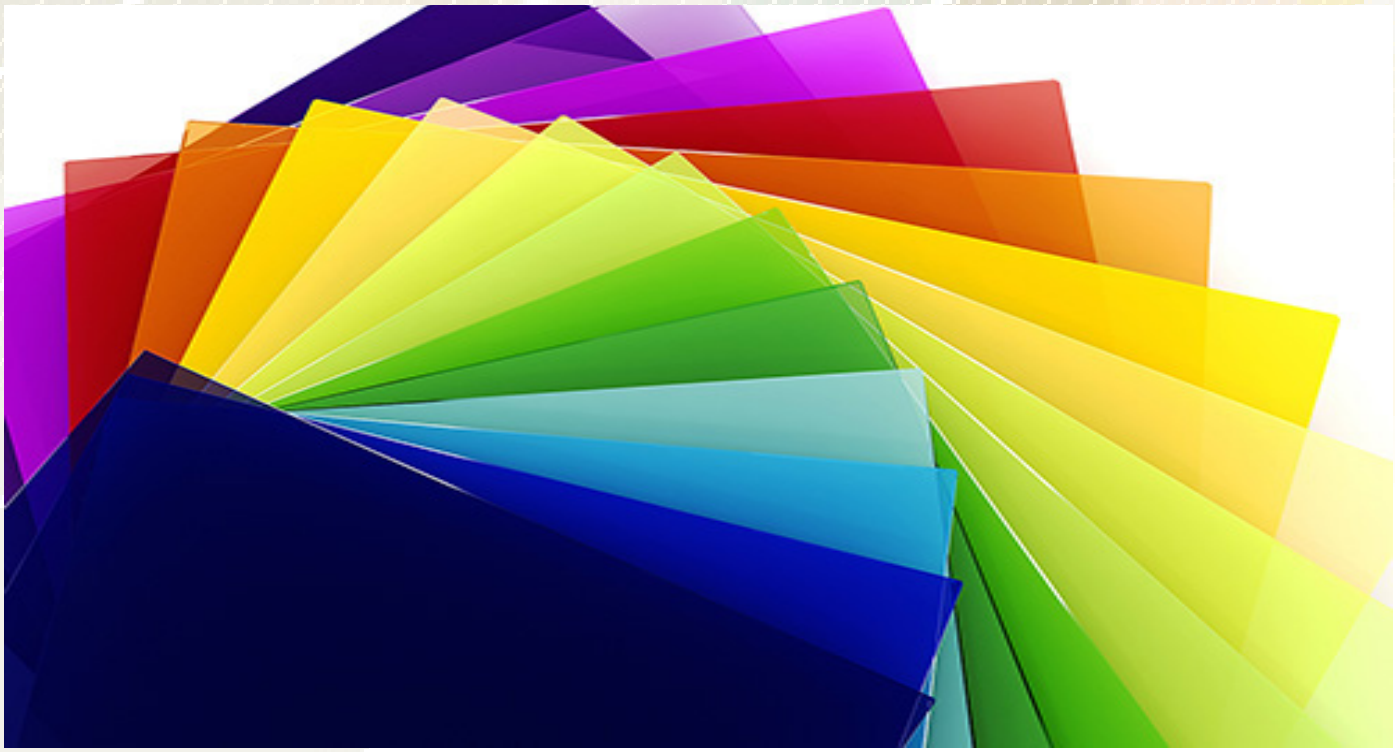
Extending it further, having exposure on both sides (asset & liability), though with different duration, companies can actually ride different cycles by following prudent risk management on the two exposures independently and optimize cash flow. This would be possible with professional treasury team either in house or outsourced.

The above pic is of "Gulf of Alaska" which can help describe the concept of hedging ECB and Export receivables as mentioned in the above article.

In the Gulf of Alaska, these two types of water run in to each other and it is an amazing sight to see where light, electric blue merges with a darker slate-blue. It is a place that has been dubbed "where two oceans meet but don't mix,"

Similarly, the objective of hedging ECB and Export receivables are mutually exclusive, may be complimenting (in some way) but definitely not inclusive in nature.

At Almus, we specialize in ECB hedging and managing risk on account of trade exposure (import/ exports). We provide outsourced FX treasury solution to manage ECB principal and interest rate risk.



Polyester Films

Polyester Films have become the preferred choice in packaging and labelling globally due to their superior technical properties like lightweight, low-cost, corrosion resistance, and excellent barrier to oxygen, water and carbon dioxide. Unsurprisingly, polyester films manufacturers in India are also thriving on the back of packaging and labelling demand in the country and due to the scale and global competitiveness achieved over the years.

Polyester Films panel is amongst the Top 3 product panels of the Council and comprises of 135 commodities at 8-digit HS code level. Major product segments within this panel include – Plates sheets etc of polyethylene terephthalate; Other plates, sheets, film foil, strip etc, non-cellular; Plates sheets etc of polymers of propylene; and Plates sheets etc of other polyesters.

World-wide import of Polyester Films is estimated at nearly USD 110 billion.

- In 2018, the Top 5 exporting countries of Polyester Films were: Germany (12.1%), China (10.9%), United States (10.1%), Japan (8.9%), and South Korea (6.0%).
- Likewise, the Top 5 importing countries of these products were: China (10.5%), United States (8.0%), Germany (6.3%), Mexico (4.8%), and France (4.3%).

India was ranked as the 19th largest exporter as well as the 19th largest importer of Polyester Films in the world. Major destination countries for export of Polyester Films from India are: United States (15.3%), Germany (4.9%), South Africa (4.3%), United Arab Emirates (4.2%), and Nigeria (4.2%).

India's export of products under the Polyester Films panel were valued at USD 1.43 billion in 2018. The segment witnessed an impressive annual growth rate of 11.0% during 2015-18. Product categories within the Polyester Films panel that have contributed significantly to the growth include:

HS Code	Product Description	2015	2016	2017	2018
		USD Mn	USD Mn	USD Mn	USD Mn
39206220	Plates, Sheets etc of Polyethylene Terephthalate, Flexible, Plain	44.0	40.4	106.4	240.3
39219099	Other Plates, Sheets, Film, Foil, Strip etc, Nes, Other	76.8	82.1	112.2	134.7
39202020	Plates, Sheets etc. of Polymers of Propylene, Flexible, Plain	150.5	125.7	145.0	190.5
39219094	Other Plates, Sheets, Film, Foil, Strip etc, Nes, Flexible, Metallised	34.1	29.8	34.3	74.0
39206919	Packaging film of Other Polyesters Nes	37.7	47.1	60.5	71.7
39204900	Other Plates Sheets of Polymer of Vinyl Chloride	39.5	45.2	50.7	55.3
39201019	Other Sheets of Polyethylene:	10.6	14.1	20.0	25.3
39206190	Plates Sheets etc of Polycarbonates Nes	3.7	2.3	14.1	19.6

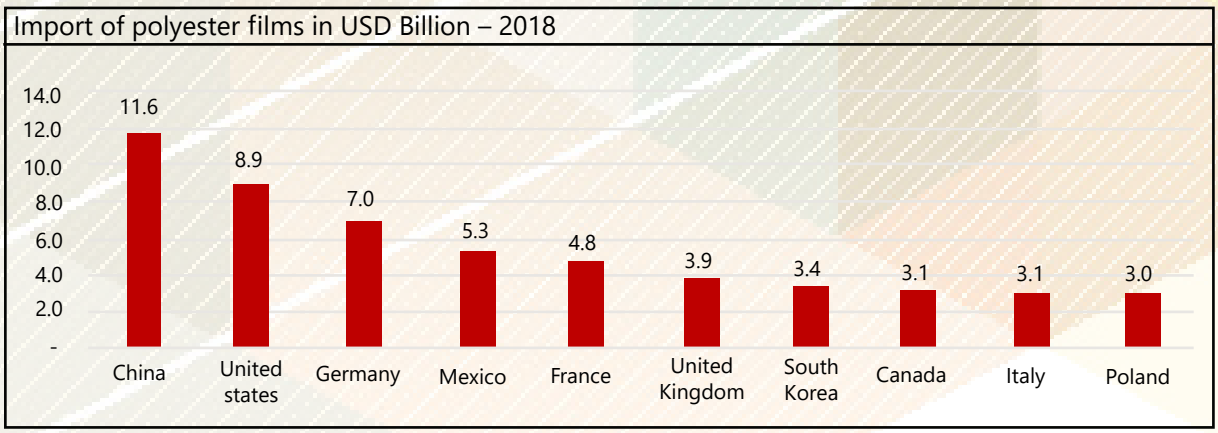
Source: Ministry of Commerce & Industry, Plexconcil Research

While India exported Polyester Films worth USD 1.43 billion to the world, it also imported these goods in huge quantity, worth approx. USD 1.85 billion in 2018 from the world. China has been a major supplier of Polyester Films to India. The country supplied nearly 40% of all such goods imported by India in 2018.

Product categories within the Polyester Films panel that have contributed to import growth in India include:

HS Code	Product Description	2015	2016	2017	2018
		USD Mn	USD Mn	USD Mn	USD Mn
39209999	Others Plate/ Sheets etc. of Other Plastic Nes	76.8	92.8	90.1	358.3
39199090	Other Self-Adhesive Plates etc Nes	214.7	228.6	293.1	359.7
39219099	Other Plates, Sheets, Film, Foil, Strip etc, Nes Other	105.6	118.1	137.4	138.5
39202090	Plates Sheets of Polymers of Propylene Nes	39.6	54.7	91.3	92.9
39205119	Other Sheets of Polymethyl Methacrylate	26.3	31.6	45.2	68.4
39211900	Other Plates Sheets etc of other Plastics Cellular	22.7	27.1	36.5	45.7
39201099	Other Plats, Sheet of Polymers of Ethylene Nes	19.0	24.5	29.0	43.4
39219029	Other Plates, Sheets, Film Foil, Strip etc, of Polymer of Vinyl Chloride: Other	15.1	19.5	22.5	41.9

Our internal research indicates that India's Polyester Films exports have immense potential for growth in destinations like China, United States, Germany, Mexico, France, United Kingdom, South Korea, Canada, Italy and Poland.



Source: Ministry of Commerce & Industry, Plexconcil Research

Some of the large players in Polyester Films business in India include: Garware, Vacmet, Polyplex, Uflex, Jindal, Chiripal, Cosmo and others.

Industry Speak

Interview with S. Krishnan, Director Of Sales Marketing, Garware Polyester Ltd. – COA Member & Panel Chairman, Plexconcil

Q: Indian import of Polyester films and sheets stands a little over the country's exports of the same product, with China contributing nearly 40% of our imports. In your opinion, what is the reason for the same and how can we reduce import dependency in the segment?

A: There are multiple reasons for the high import from China and below are some of the main reasons are outlined as below:

- Imports increase when the domestic market price is higher by Rs 8/kg to Rs 10/kg over and above the International/ China-landed price which is significant considering the volumes imported. Metallising/ Coating/ Yarn grade end users import from China in large volumes.
- Some grades of specialty polyester film such as Capacitor grade is not made locally in India and hence imported in China.
- China itself is a big consumer of "B" Grade. However, as the Chinese market has been slow, there are large volumes of B grade / off cut exports to India, at a very low price.

Imports From Thailand / UAE

India is one of the major B grade consuming regions in the world, and hence we see substantial import of offcuts and downgraded material from UAE/Thailand as well as EU/ USA produced material. Due to the Free Trade Agreement with Thailand and no import duty on products imported from the country, in some months, 800 to 900 tons per month of both thick/thin range films and sheets are imported at very low prices. Given the price difference, easy availability and short lead time, imports on regular basis becomes a more viable option for a lot of industry players.

Nevertheless, while we are not Import dependent and the country's requirement can be easily met with the supply capacities, there exist some arbitrage options, which the customers would like to utilize, from time to time.

Q: In the period 2015-18, the segment has grown 11% and with continued high demand for packaging & labelling, the sector continues to grow. What are the main drivers for growth of the segment in India, exports and domestic?

A: The rise of the Indian middle class, the growth of organized retail, the rapid growth of exports and India's e-commerce boom are all fueling packaging industry growth. The industry may still be considered largely underpenetrated, and thus offers significant growth potential. With large multinational FMCG companies expanding in India to fill up the growth in demand for packaged food, shampoo, soap etc demand for packaging material has received further impetus. Greater competition and Government regulations, need for proper packing and labelling of quality, quantity price, date of manufacturing and expiry have led to growth of flexible packaging industry as well.

Today, India has become an export hub for packaging materials and raw material for packaging as a number of manufacturers continue to invest heavily in machinery and technology to not only increase capacities to meet global

demands, but also manufacture products that are of world class quality and standards. This has resulted in significant export growth for the country.

Q: Which international regions or countries have witnessed increased demand for these products from India in the past year 5 years and/ or demonstrate good export growth potential?

A: In the past several years there have not been any major expansions that have taken place in EU and USA (except by Indian manufacturers). However Indian manufacturers have increased their exports and share of the market has been growing. This could be attributed to our ability to maintain competitive market prices while offering quality standards and production capacities to meet the demands of these markets. In addition, Indian exports have seen significant growth into markets like Nigeria/ other African countries, Eastern and Central Europe where Indian manufacturers are even setting up new PET capacities. Indian exports have been growing in the South American regions as well.

With focus on capacity expansion, quality upgrade, technological advancements, competitive pricing and Government support, growth of India's market share in top export destinations and continuously identifying emerging markets to service, has significantly enhanced our export potential and opportunities have been well exploited.

Q: What, in your opinion, are the global opportunities for Indian manufacturers and exporters? What are the strategies adopted by key players to promote the growth of the industry segment?

A: The global opportunities for our industry are very huge and especially for some of the specialty products. A recent study indicated that we have tapped less than 5% of the total potential for Shrink films across the world, which itself demonstrates the opportunities in just one category.

The strategy adopted by Indian manufacturers have been two-fold, resulting in significant growth:

1. ***Putting up manufacturing facilities overseas in order to be close to customer base as in the case of:***
- UFlex in Poland, Egypt, USA, UAE
- Polyplex in Turkey, Thailand, USA, Indonesia.
- SRF in Thailand, South Africa. Putting new PET capacity in Hungary

2. ***Buying the existing capacities as in the case of:***
- Indorama Ventures buying DuPont
- Jindal Polyfilms Ltd buying Exxon Mobil, Luxemburg and Treophan, Germany.

In addition, manufacturers in India have been very aggressive in expanding their exports to reach almost every corner of the globe.

Q: What, in your opinion, are the challenges faced by the industry and what are its impact on trade, market and environment, especially considering rising global concerns regarding the recycling of packaging material?

A: The major concern that the industry faces today, with negative stance that has been taken against Plastics globally, is achieving recyclability as a complete solution to address the current worsening plastic waste situation. Ban on single use plastics while may be effective to some degree, plastics cannot be completely eliminated from economies as there are far reaching benefits of hygiene, transportation, flexibility, costs, among others. Hence, recyclability and use of sustainable alternatives to reduce dependency on non-renewable resources and reduce environmental damage is imperative. As is sustainability of the industry that, especially in our country, employs lakhs of people and is a significant contributor of the economy.
Secondly, the anti-dumping and countervailing duties that come up from time to time when region/s try to protect their local production capacities also impact our exports and are counter productive to ensuring quality standards and competitiveness of products in the global marketplace.

Q: Innovation and technology have played a significant role in the evolution of the industry. What are your recommendations for future sustainability and enhancing the market footprint of the industry players?

A: The significant role that innovation and technology need to play, on urgent basis, is to find an effective way to recycle plastics. This fact alone will decide the future growth and sustainability of the industry.

Q: What is the kind of additional support, in terms of policies, infrastructure, etc. that you believe that the industry should receive from the Govt for the growth, expansion, and improvement of the segment?

A: Some of the areas where the Government could help the industry in a meaningful and productive manner would be to ensure the following:
- Industry should get a fair hearing in terms of any trade agreements in place today which adversely affect the domestic industry. For example, the one-sided Free Trade Agreement with Thailand allows imports of polyester film range into India with no duty whereas exports from India are subject to the normal import duty in Thailand.
- To lay down concrete norms to address the recyclability issue.
- Give tax concessions to encourage investments in recyclability.

Implementing Automation Systems

How to Do It Right

In today's competitive world of manufacturing, it is more necessary than ever to use more efficient, and therefore sometimes complex, automation systems. The need for more automation has many sources. If you are thinking of putting a complex automation system for high volume consumables, here are points for consideration:

- Labor shortages. Experienced, skilled operators, process engineers and maintenance people are often in short supply and are needed to improve efficiency, effectiveness and lights-out operations.
- Contamination issues. Many medical or high-end electronic products are very sensitive to contamination through human handling or do not allow contamination through particles (dust, liquids) or DNA.
- Part quality. Depending on the sensitivity of parts due to delicate surface features, soft material, very thin sections, and critical dimension, uncontrolled interaction with humans can damage a part or decrease its quality. More human handling means more chances of quality defects.
- Productivity. Automation can often work faster, inspect faster, and occupy less floor space than manual operations. Automation systems also do not need break time or have performance fluctuations comparable to human operators. Most inspection through automation is measurable and much more repeatable and reliable.
- Overall efficiency. Since automation is best applied right at the molding machine, parts orientation is never lost and therefore need not to be regained by expensive bowl feeders or other feeding systems. Logistics are also simplified by not having to ship parts to warehouses and back for further processing.

The point here is not to claim that humans perform "badly" in manufacturing processes, but rather to show that with the right knowledge, the right technology and the right preparation you can equip your plant personnel for higher tasks and make up for the lack of a qualified or even unqualified work force, as well as improve your production outputs, part quality, and overall efficiency at lower part cost.

Getting your staff ready for Automation

How do you ensure that you have enough and qualified manpower to understand, operate and maintain highly complex automation systems?

- Eliminate "firefighting." Typically when the economy slows down, companies tend to radically reduce their maintenance staff and outsource their mold-making or mold-maintenance operations. However, when it concerns operating a complex, high-speed automation system, this is a killer.
- Don't be scared. Implementing complex, high-speed automation at a molder that has experienced only pick-and-place or dropping parts out of the press, is a scary and mostly unsuccessful approach. It is important that the molder contemplating an advanced automation project is gradually exposed to automation from simple to more complex to develop a solid automation process knowhow. Plant personnel should feel confident and motivated to work with the automation and not be scared of it.
- See the value. It is important that not only the plant management see the value of automation, but even more so the people who will have to deal with it on a daily basis. Involving key personnel in the project from the beginning facilitates better understanding and promotes an inclusive and improved performance.

While this seems logical, but they are still the biggest reasons for an unsuccessful automation project on the Molder side.

Willingness of the team to grow and evolve. Highly complex automation is not something for everyone in the company. This necessitates identifying the right talent and enabling them to develop their skills and knowledge and grow with the project.

Early synchronization of the work cell partners. It is essential to align expectations and strategies between all project partners; molding machine, mold, and automation, early in the project. This must be done to utilize their different knowledge and skills to avoid mistakes and create an efficient work environment. Eliminating mistakes later costs extra money and delays the time plan.

Define clear interface responsibilities. An important aspect of the project is to define clear interfaces between the team members (process responsibility, mechanical, electrical, software) so that everybody works together efficiently and their areas of responsibility in the project are clearly framed.

Clear URS (user requirement specifications). The URS is the heart of the project and defines the expectations of the molder. It is the molder's strongest tool to address all requirements, concerns and limitations. It allows all suppliers to provide a complete and reliable quote that addresses your requirements accurately and has a huge impact on timelines as well.

What's required of your Automation supplier

It is essential that the automation supplier have significant knowledge about the injection molding process, as well as injection molds and the quality defects typical for injection molding. The supplier should have knowledge about different plastic materials and their specific behaviors (MFI, soft vs. brittle, static charge behavior, surface sensitivity, tendency to show marks from silicone suction cups, etc.). In addition, it is important to know the machine-to-machine interfaces—SPI, electrical/Euromap 67, mechanical/Euromap 12, data protocols/Euromap 63 or 77—to name just a few.

Specialized in IMM automation. A knowledgeable supplier knows that the most important thing is keeping the cycle time as low as possible. The knowledgeable partner knows that his only chance to reduce the cycle time is to reduce the mold-open time. Reducing the cycle by 0.5 sec of mold-open time does not sound a lot. However, on a 5-sec overall cycle, it gives you 10% more output, which would translate to 570,000 more cycles (shots) per year. Multiplied by the number of cavities, let's say 64, this would be roughly 36,800,000 parts more per year. Remember, we were only talking about 0.5 sec cycle-time reduction.

On the other side, the same knowledgeable supplier knows that once the mold is closed, the automation system movements should slow down enough that the robot returns to the mold only shortly before it opens again. The slower movements will significantly increase the lifetime of many components and therefore guarantee higher uptime. Use speed and high acceleration only where they are absolutely necessary.

Understands buyer's capabilities and weaknesses. This starts with proposing and designing reasonably complex automation fitting the buyer's capabilities. Some automation suppliers tend to "oversell" the molders with highly

complex automation. This can overwhelm molders who will not be able to utilize the equipment to its maximum and maybe even end up not utilizing the automation at all. It is the responsibility of the supplier to understand the capabilities of the customer and therefore develop a customized solution that fits the available skills.

Involving the Buyer. It is essential to develop the automation concept with the buyer involvement. Having many review sessions so the buyer has a chance to grow with the system while it is being developed and built as well as address concerns early on is important.

It is also beneficial to have a local supplier who understands the climate, culture, language and state or federal regulations and any other challenges pertaining the country, region, or locality.

A good supplier knows and can support relevant industry-specific standards, including the validation standards—such as GAMP 5 (Good Automated Manufacturing Practice) for medical plants or FMEA (Failure Mode and Effects Analysis).

The supplier should know and use components and controls with good local support and acceptance. Obtaining the preferred control supplier or other components can make things easier in terms of ease of operation and support for the customer.

Another important point is adapting to the customers production environment, such as climate, temperature, humidity and range of variability. Depending on the materials used and geometry of the part, temperature and humidity changes can dramatically change the electrostatic charge effect on parts. This often cannot be simulated at the supplier's factory acceptance testing because the environment there is completely different.
Today, it is more important than ever before to understand cleanliness—cleanroom vs. white room vs. gray room or no restrictions. The automation supplier needs to know the different room specifications and the measures required to not jeopardize these limits. There are many other considerations such as vacuum creation, compressed-air collection, exhaust-air filtering, etc. as well.

The automation supplier should also be able to understand the possible impacts on part quality due to batch-to-batch variations in materials (MFI–melt flow index) and other parameters, such as drying tolerances. This will help significantly in choosing the right methods and parameters for quality inspection.

Effective Aftersales and Service Support

An effective automation supplier should have not only good telephone support, but advanced support technologies such as remote service solutions, web service support, and even augmented reality support.

It is a big benefit for a complex automation project to have a local project-management and support team, since reaction times are important. In the project phase, it is also beneficial to have significant overlapping work hours.

Offering a good local support, in terms of service technicians and spare parts inventory is likewise important. Remote services have helped significantly to reduce downtime and optimize equipment without a service visit. But there will always be a need for physical support at the customer side.

Automation features to look for

Is it designed for most sufficient floor space usage? Medical and sensitive electrical and consumer parts are often manufactured in clean rooms or white or gray rooms. Those rooms are expensive and using space efficiently can be a huge cost factor. Design of space-optimized automation systems can make a huge differences in layout concepts and space utilization.

Is the design highly reliable for high-speed, high-volume processes? A good automation manufacturer knows which hardware components are stressed the most in high-speed applications. The supplier also understands that it is not the speed that "kills" the equipment but more so the acceleration and the deceleration. The knowledgeable supplier will use oversized bearings and structural parts to stretch the maintenance cycle to the maximum as well as the lifetime of those parts. This extra cost is an investment in the reliability and effectiveness of the system.

Does it use latest materials that are light but robust? Investing in more expensive, advanced materials will, in many cases, pay off fast. Good and effective automation is not cheap but shows a reasonable ROI besides having

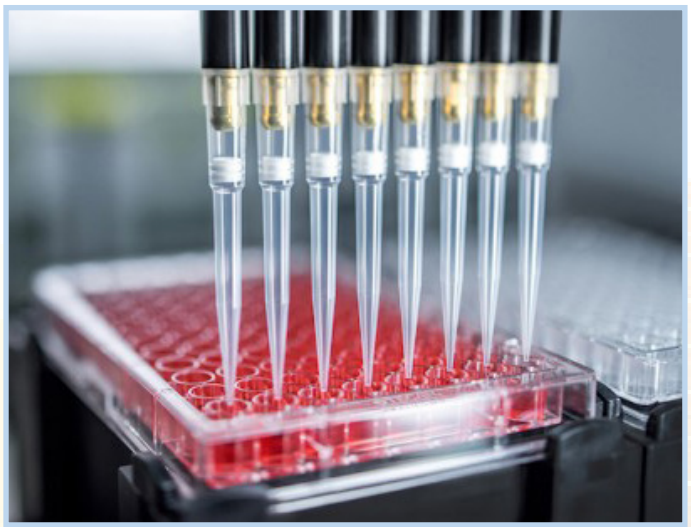
great impact on quality improvement, reduction of contamination, overall cost reduction, and more.

Is it designed for low maintenance? Today's technology offers components with low or no maintenance requirements. It is important to make intelligent use of those components to reduce downtime and increase yield. Oversizing certain components with limited lifetime, like bearings and structural parts, can make replacement less frequent.

Does it have good access points for troubleshooting and maintenance? One fundamental point that is often overlooked is to keep the automation simple to troubleshoot. This requires for the operator to have easy access to all sensitive areas where products can jam or that need re-adjustment after some time.

Is it designed for user-friendliness? Intuitive controls and HMI (Human Machine Interface) aid the acceptance of complex automation significantly. It is important that the supplier understand the skill level of the operators and adapt the control to the customer's needs.Simplified user interface, limited access and flexibility are important and allows the buyer to control and make changes himself.

Does it allow for fast and easy product changeover? For automation systems that can produce several different products and need changeover of certain components, like end-of-arm tooling (EOAT), it is essential that changeover be fast and easy. Here quick-connects with integrated pneumatic, vacuum and electrical circuits are mandatory.
Source: ptonline.com Author credit: Markus Klaus



Industry Speak

Interview with Jayanthi Bhagatha, CEO, J B International

Q: How prevalent is the use of complete automation and robotics amongst the Indian plastics manufacturing segment?

A: After visiting many Indian plastics & polymer manufacturing companies in India prior to our setup here in Bangalore, we realised that there is so much fervour to venture into RPA to increase production and overall development, but most of the manufacturers are paranoid about the investments. Many are of the notion that

- It is an expensive ordeal
- The implementation time would come in the way of their production line
- They have to face the Herculean labour of coordinating between various vendors to implement the solution at their facility
- There might be tremendous job insecurity in the production floor
- Maintenance and part replacement in automation & robotics becomes a hassle because of unavailability of spare parts in time

Q: Typically, which are the product manufacturing segments that are most likely to benefit from automation?

A: Those segments which deal with repetitive processes, tasks which involve consistency, good quality, high volumes and are more prone to human error, labour exposure to harmful materials are most likely to be benefitted.

Having said this, even one of the largest aerospace part manufacturing and assembling units that we are working with who have a lower volume as compared to the other sectors require automation to reduce their cycle time from

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8 hours to 30 minutes and thereby increasing throughput.

Realistically, every industry in one way or the other, be it the Plastics and polymers, Packaging, Electronics, Automotive, Industrial, Pharmaceuticals, FMCG or Aerospace can be benefitted depending on their requirements.

Q: What are the distinct advantages that automation brings to the segment?

A: Automation offer several advantages to users:
Gains in productivity, quality, product life cycle flexibility, and labour savings are the driving interest in automation among large and small companies.

Safety: Automation & Robotics ensures maximum safety for employees who work in hazardous conditions such as reducing their exposure to noxious gases, protecting workers on the production lines from plastic shavings and the excruciating task of handling sharp objects.

Consistency & High quality: For a contract manufacturer who gets a run of a million units and has to make each part precisely the same, automation can greatly assist by providing uniformity and exceptional standards in all production runs.

Efficiency: Robots function unswervingly with consistent quality and perform an increasing range of activities – the three 'D's of hazardous tasks (dull, dirty and dangerous), improving workers' health, assuring safety and providing job satisfaction. Robot adoption can enable and encourage employees to move on to higher-skilled tasks such as production planning and supervision.

Speed: The pace of robots cannot be matched with that of manual labour. This greatly reduces overall production time and gains impressive results in the long run.

Q: What are the perceived challenges to a wider application/ implementation of automation?

A: One major drawback often associated with the implementation of automation is worker displacement. Despite the social benefits that might result from retraining the displaced workers for other jobs; in almost all cases, the worker whose job has been taken over by a machine undergoes a period of emotional stress.

Other potential risks include the possibility that the employees will become slaves to automated machines. These risks aside, Automation technology, if used wisely and effectively, can yield substantial opportunities for the future.

Q: What are the key considerations that must be taken into account by manufacturers when opting for automation?

A: Firstly, the manufacturers have to come out of the above notions mentioned as the Automation & Robotics industry and its approach have changed drastically over the past few years.

It used to be an expensive ordeal, but this isn't the case as companies like ours, who are involved right from the conceptual stage to implementation & after sales support, have simplified it extensively to be cost effective and to contribute in achieving the ROI. Hence, choosing a good integrator as a partner is an evident step.

If it's an existing set up, we always recommend our customers to focus on their pain areas first, sort out the issue and then move on to the other functions to increase productivity instead of turning the ship completely to find and implement solutions in all areas at one go.

If it's a new setup, we recommend to plan out in stages keeping in mind the scope of design for expansion.

Our implementation time that we seek from our customers is minimal as we utilize the time during the preventive maintenance shutdown. We spend a greater amount of time on planning and simulation with reasonable time on implementation and hence, most of the issues are addressed during the planning & simulation stage itself.

Another issue to address is making the workforce understand that the automation being deployed is only going to enhance their productivity, upgrade the manner of working and not take away their jobs. They can be more efficient in areas that do not require Automation.

Q: What are cost implications for automation? How do you evaluate and justify ROI for the clients?

A: With labour costs steadily rising, the skill gap widening and robot technology costs coming down while ease of use is going up, robotic automation is no longer the exclusive domain of multinational conglomerates. Small to me-

dium-sized enterprises (SMEs) can cash in on robots too. The cost of automated systems varies depending on the size and scope of the project, and can range from several thousand dollars to several million dollars. There are also various levels of automation with increasing complxity. We need to consider how much automation is appropriate for an operation. A careful evaluation of the full depth of automation will ensure the investment is fiscally responsible.

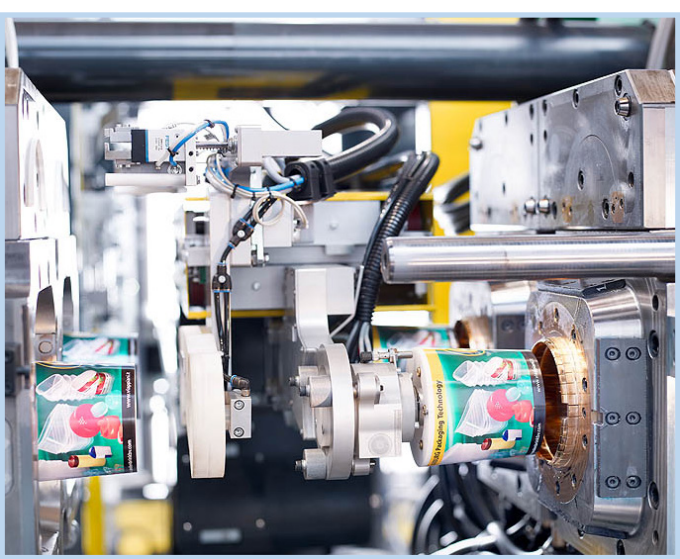
While calculating the ROI, we must consider numerous parameters and not just replacing the labour and associated costs. It is much more than that. We need to consider the ongoing rejection rates, throughput given by the manual operation, dependency and availability on certain skilled labour at all times, compromising on the quality and yet letting down the brand value, downtime costs, extensive training requirement for labours and many other factors that cannot have a monetary value.

Q: What are the various technologies or solutions available to the plastics industry?

A: Integration of robotics in plastic injection moulding has provided many advantages that are listed above.

Robotics has been successfully implemented in many areas of plastic manufacturing, which includes:

- Part insertion/extraction
- Degating / Trimming / Cutting
- Secondary part operations such as insertion of clips, gate cutting, loading of inserts, quality control checks
- Post-secondary operations such as assembly, part making, inspection, packing, palletizing
- IML (In Mould Labelling) technology
- Vision Systems using applications such as ID verification, Optical Character Recognition, 2D, Barcode Reader, Fly-by-inspection systems integral to the robotic systems



Q: What, do you believe, is the future of automation in Robotics in plastics manufacturing in the future?

A: Manufacturing is becoming increasingly more efficient, customized, modular, and automated. But factories remain in flux. Manufacturers are known to be slow adopters of technology, and many may resist making new investments. But as digitization becomes the new standard in industry, competitive pressure will escalate the inventive to evolve.

As an innovative automation provider, JBI-IMDECOL offers the plastics industry tailor-made automation solutions, designed to meet your specific needs and requirement. With over two decades of experience designing and implementing unique robot systems worldwide, we continue to strive for out-of-the box automation solutions time after time, every time. The JBI-IMDECOL automation technologies can be integrated with all types plastic machinery. JBI-IMDECOL, one of the leading companies in the global IML & Robotics industry of was established 20- years ago in Israel and has supplied over 650 unique tailor-made systems designed, built, installed and maintained all over the world for many multinational companies in the food & beverage, toiletry, and other industries.

For more information, visit www.jbi.co.in

marketing@bulkcorp.int.com

Why sustainable plastics matter?

For people to make smarter material design decisions, sustainable plastic alternatives have to preserve or even build upon the performance characteristics of the original. They must be competitively priced and have unique, genuine advantages that support making a material switch.

There are many paths to achieving a more sustainable plastic, and reducing the proportion of petroleum-based feedstock by even small margins can go a long way toward making plastics more sustainable. From slowing input into methane-belching landfills to leaving more greenhouse-gas emitting petroleum in the ground, even small additions of renewable, biobased content can help to drastically reduce harmful emissions.

Finding the right sustainability strategy for your product therefore means your company is playing a part in reducing the release of greenhouse gases and easing our r eliance on non-renewable resources.

Broadly speaking, so-called "environmentally friendly" plastics fall into three types:

- Bioplastics made from natural materials such as corn starch
- Biodegradable plastics made from traditional petrochemicals, which are engineered to break down more quickly
- Eco/recycled plastics, which are simply plastics made from recycled plastic materials rather than raw petrochemicals.

Bioplastics and Bio-degradable Plastics Forecast

Eco-friendliness, favorable government policies, renewable raw material sources, and high acceptance from consumers are driving growth in the global bioplastics market. While Europe accounts for more than two-fifths of the total market share and is expected to maintain its lead status, AsiaPacific is expected to register the largest growth rate with a CAGR of 20.4% through 2024.

According to a new report published by Allied Market Research, the global bioplastics market was valued at $21,126.31 million in 2017, and is projected to reach $68,577.25 million by 2024, registering a CAGR of 18.8% from 2018 to 2024. Bioplastics are extensively used in the production of rigid packaging.

Meanwhile, the biodegradable packaging market was valued at USD 85.11 billion in 2018 and is expected to reach a value of USD 119.3 billion by 2024 at a CAGR of 5.9% over the forecast period (2019-2024). Biodegradable packaging solutions are increasingly finding applications in a wide variety of industries due to their low environmental impact and high demand. Biodegradable packaging made from renewable resources decreases dependence on petroleum and reduces the amount of waste material, while still yielding a product that provides benefits similar to traditional plastics.

The production and use of bioplastics and biodegradable plastics is viewed as a sustainable solution due to low emission of greenhouse gasses. Factors such as eco-friendly properties, increase in consumer awareness, growth in environmental concerns, and favorable government policies drive the growth of the bioplastic market. However, high production cost and comparatively lower performance standards than synthetic plastics restrain the market growth to a certain extent.

The level of technical complexity of bioplastics and biodegradable packaging is increasing and their use in rigid is expected to grow at the same pace throughout 2024. The commercialization of co-extruded double or multiple layer film products has gained momentum in the recent years and finds applications in various end-use industries such as flexible packaging, textile, agriculture, and horticulture, consumer goods, automotive, electronics, building and construction, and others as industries continue to explore these eco-friendly plastics over conventional plastics.

Environmental Impact of Bio-degradable Plastics

1. Biodegradable plastics result in reduced carbon dioxide levels as they contain additives that cause them to decay more rapidly in the presence of light and oxygen. Unlike bioplastics, biodegradable plastics are made of petrochemical-based plastics and don't always break down into harmless substances and at times may leave behind a toxic residue unsuitable for composting.
2. Biodegradable plastics can reduce greenhouse gas emission levels.
3. Biodegradable plastics are broken down by naturally-occurring bacteria. As they do not always require CO2 as part of the manufacturing process, greenhouse gas release may never occur during the decomposition process and when they begin to break down in the environment, bacteria in the soil begin to consume the components, reducing the potential for pollution in every biome.
4. Biodegradable plastics do not release other dangerous substances such as methane, Bisphenol A (BPA), Phthalates, etc upon decomposition as these do not typically exist with biodegradable items.
5. Biodegradable plastics reduce the amount of waste we produce. With the correct composting equipment to manage biodegradable plastics, we can experience an entire breakdown of the product in 18-36 months, depending on method used.

Advantages to the Manufacturers

1. Biodegradable plastics consume less energy during the manufacturing cycle. Although biodegradable plastics offer a slightly higher cost in the production cycle, it consumes less energy to produce, requires burning fewer fossil fuels, and releases fewer contaminants at their end-of-life stage. Hence the long-term cost of using biodegradables could be substantially less than traditional plastics.
2. Biodegradable plastics would direct petroleum consumption to other needs. Traditional plastic products come from the heating and treatment of oil molecules. This process turns them into polymers that become useful for the industry. Roughly 4% of plastics comes from fossil fuels and by using Biodegradables that come from products like switchgrass or corn, we could redirect the petroleum being used by the industry to for transportation, etc.
3. Biodegradable plastics can mix with traditional products. We do not need to make completely new products using biodegradable plastics to create an environmental benefit with this technology. Once the natural materials are turned into polymers, they can work with the ones that were manufactured using oil molecules. That means we can mix the traditional manufacturing cycle with the natural one, reducing the percentage that comes from fossil fuels. When we create this mixture, the plastic products often have more strength as well.
4. Biodegradable plastics require less energy during the manufacturing cycle. When you compare the poly-

mers made from corn or natural products to those using raw petroleum, it requires 65% less energy to create a similar-quality biodegradable product. That is in addition to the 68% reduction in greenhouse gases that occur during the manufacturing process.

5. Biodegradable plastics could create new export industries. Many of the mature markets for plastic products in the developed world are looking for ways to reduce their carbon and waste footprints. Switching to this product and making biodegradables a top priority offers excellent export potential for the country that can adopt the technology faster and perfectly.
6. Biodegradable plastics create a new marketing platform. While biodegradable plastics are not exactly 100% safe, they are usually viewed as a product that supports sustainable business practices. Organizations that adopt this product are often seen as being preferable because they are viewed as being environmentally conscious, leading to significant changes in how people and other businesses see each other.

Disadvantages

1. Biodegradable plastics must follow a specific disposal procedure to be effective.
2. Biodegradable plastics may contain small pieces of metal that impact effective breakdown of the product and increase potential toxicity in the soil
3. Biodegradable plastics require the weather to cooperate with their disposal as they are impacted by temperature and humidity. Equatorial and far northern climates are unsuitable for its decomposition.
4. Biodegradable plastics do not account for herbicides and pesticides adding the threat of pollution.
5. Biodegradable plastics may reduce the amount of recycling that we can do without the right technologies for effective waste management of such products.
6. Biodegradable plastics come at a higher capital cost as at current technology levels, it may cost up to 50% more to manufacture biodegradable plastics than it does to follow the traditional production cycle.
7. Biodegradable plastics require use to use croplands and water to produce raw material input that in turn may impact food production and strain water resources.
8. Biodegradable plastics will not solve ocean pollution problems and would still require comprehensive waste management policies and programmes.

Impact on the Future

Biodegradable plastics are often considered a "savior product." The advantages and disadvantages of biodegradable plastics give us hope for the future because there is an opportunity to reduce our reliance on fossil fuels. While it would be inaccurate to say that these items are free from emissions, it is necessary to create the infrastructure necessary to process or decompose the biodegradables in a beneficial way.

Industry Speak

Interview with
Pranay Kumar,
Chief Environment Officer,
Vasudhaecofriends projects (P) Ltd

Q: Why did you choose to pursue the production of biodegradable plastics?

A: We, Vasudhaecofriends Projects', BioD, commenced working on degradable plastics in 2006 because we could see the mounting non degradable plastics waste like bags, milk pouches, bottles etc in cities and along railway tracks. Non-Recyclable and Non-degradable plastics waste like pesticide bottles, Non-woven Polypropylene bags (commonly sold as "cloth bags), agriculture mulch films, Fertilizer and cement bags, paints, lubricants and chemicals containers are strewn across forests and rural landscape, besides cities.

Since one could hardly find any biodegradable plastics, besides Photo-Fragmentable (what is known as Oxo-Degradable or Oxo-Biodegradable in today's market) despite ban on these spurious plastics, we started our own re-

search to make Real biodegradable (Biodegradable means "to be consumed by microbes") polymers.

Thus far we have made BioD for PE, PP, PS, HIPS and PET. Final products have been in world market for at least 9-10 years now. We are working on Biodegradable Expanded Polystyrene or Thermocol currently.

Q: What are the standards that have been set to ensure that products manufactured are truly biodegradable or compostable?

A: India is way ahead in the world on standards and test methods. Ministry of Environment, Forests and Climate Change, Govt of India's progressive came out with a comprehensive Plastic Waste Management in March 2016 and then in 2018 specifically for Multilayered plastics waste. There are Nine biodegradability test methods which are approved in the schedule and rules including Aerobic (in presence of oxygen like IS 14855-1 & 2) and Anaerobic (in absence of or less oxygen like IS 15985).

Unfortunately, these are not well known and understood in the industry or state and municipal governments. Thus, rules in variance with Central Government's rules are being notified by State Environment Ministries and Municipalities are being formulated as seen in Karnataka and Maharashtra.

Central Pollution Control Board has regrettably not recognized that propagation of IS 17088 (Compostable; Test method IS 14855-1 & 2) as a single solution has not helped the domestic plastics industry. The retribution against plastics across the globe has resulted in the shutdown thousands of plastic making units, specially MSMEs, rendering lakhs unemployed and resulting in import of starch granules from Europe and China.

The above factors have resulted in decline of exports from the unorganised part of the industry.

Compostable plastics are biodegradable plastics in presence of oxygen (aerobic) and requires Industrial Composting Facilities, which are not available in India.

BioD follows both IS 15985/ASTM 5511 for All polymers and Compostable as per IS 17088/EN 13432/ASTM 6400 for bags.

Q: What has been the impact, in terms of cost and infrastructure change, on your manufacturing as well as cost to consumer as compared to traditionally manufactured plastics products?

A: We make petro based plastics biodegradable using BioD, so there has been no process or product changes, hence there is no additional cost incurred on capital cost, which is big plus. The cost implication for consumers is 15-20% maximum vis a vis Non degradable plastics.

Q: What are the challenges typically faced by manufacturers aiming to enter into the manufacturing of bio-degradable plastics?

A: There is no impact on manufacturers who are users of BioD. However, Starch based granules users face a lot of challenges in:

1. Procurement of granules as all granules are imported
2. Cost and price of starch products in the value chain is exorbitant with final price to end consumers being 250% to 300%
3. The final price and numerous restrictions on manufacturing, arbitrary rules and regime of local governments, etc. make starch bags unviable for exports.
4. Negative campaign across the globe contributes to further loss of market and exports.

Punjab Plastics Bags and Films Manufacturers Association proposed recycling of their products but are still awaiting a go ahead despite the state being flooded with compostable and Oxo-Fragmentable products. This is one of the many paradoxes due to conflicting rules between Central government and Local government rules.

Hence manufacturing of biodegradable products is less challenging than implementing varied rules of various governments and agencies. The confusion has impacted exports of not only compostable and biodegradable carry bags but tertiary packaging plastics too.

Multilayered plastics on the other hand benefited from the PWM (amendment) 2018 rules, which favours biodegrad-

able digestion and landfill gas recovery (both processes of Anaerobic Biodegradation as per IS 15985/ASTM 5511)

Q: In your opinion, how severe is the threat from spuriously manufactured plastics claiming to the bio-degradable? How can the industry combat such practices?

A: Since Only One Test standard IS 17088 and One lab (CIPET) has been approved by CPCB, the implementing agency, only a few manufacturers /traders have been allowed to sell Compostable Carry bags. This has led to spurious bags being sold as compostable/oxo-degradable or starch bags. Polypropylene Non-Woven bags though banned by CPCB are being sold as "cloth bags" across India.

Unfortunately, local government agencies are misinterpreting the PWM 2016 rules leading to unnecessary raids on manufacturers of other plastic items. Though Compostable bags less than 50 microns are allowed as per PWM 2016, State Pollution Control Boards and State governments are insisting on Compostable bags and films of 50 microns and above, thereby putting Compostable plastics manufacturers disadvantaged vis a vis Non-degradable plastics bags of 50 microns and above.

Huhtamaki PPL Thane plant was shut down due to non-implementation of PWM 2018. If the polyethylene layer would have been made biodegradable, it would have met the PWM 2018 rules for multilayered plastics as per IS 15985 [2 ii (ga)].

Q: What are the kind of policy changes or measures that you believe are needed to encourage more manufacturers to switch to production of bio-degradable plastics?

A: All Nine methods tested by Any NABL lab for All polymers, without the endorsement of CPCB will bring in more than 95% of the compliance. Plastics, Packaging and FMCG industries are ready to follow the rules. Communication of the intent and challenges faced by the industries with MoEFCC, Commerce Ministry and Petroleum Ministry would clear the air and lead to eradication of confusion and boost " Make in India " and more exports. This will further enhance India's image as a responsible producer and exporter.

I would say that internal discussion in each company, across various plastics associations, deeper understanding of MoEFCC's rules, policies and their intentions would lead to better compliance and implementation of the rules. After all Corporate citizens are also stakeholders in World's environment and ecology.

A simple communication in public domain by Ministry of Environment, Central Government will align the implementation of the PWM rules across India and lead to spurt in exports as India is the leader in plastics recycling and progressive rules.

Q: What are your recommendations to those who wish to enter into this segment, considering traditional plastics industry is a highly competitive and cost sensitive industry?

A: Firstly, anyone entering should have a full and deeper understanding of the science of biodegradability, International and Indian test methods, standards and policies.

Secondly, since Non-degradable plastics products are highly cost competitive, the biodegradable manufacturers, traders should seek the high value products, which can bear the cost increase and leverage the sustainability tag. Attempting to enter single use plastics segment or lower priced products would be detrimental for the entrepreneur. After one has enough cash reserves through various high value products or products, which essentially needs to be biodegradable, then the entrepreneur should enter mass products.

Q: What is your opinion on the future sustainability of bio-degradable plastics?

A: Biodegradable plastics with sustainable plastics with low eco-footprint across value chain will be able to survive the stringent ecological and environmental sustainability requirements. If biodegradable plastics are Recyclable without harming the recycling stream, it would be a great advantage.

Unsustainable starch based or agro/vegetable-based products which have high water footprint and are difficult or expensive to make will not be sustainable in the long run, hence, R&D should be continuously undertaken to explore its viability or find alternatives.

Biodegradability is basically understanding of polymer science and microbiology. Clear communication with all stakeholders will further adaptability of biodegradable plastics across the world. Algae based plastics, if scalable and economical, along with fossil based biodegradable plastics have a great future and would bring in sustainability across the value chain.

There has been an exponential increase in demand of biodegradable plastics and given that biodegradable plastics makes hardly one percent of the plastics, it has a lot of potential to grow in future. I see biodegradable plastics as future of packaging and exports from countries like India.

Focused on innovation and sustainability, Vasudhaecofriends Projects is in domains of Biodegradable plastics, Solid Waste Management, Drinking water solutions and implements cost effective technologies and solutions for mass adoption for people and Environment.

BioD, a pioneer in biodegradable plastics products since 2006 in India, can make ANY type of plastic "biodegradable" as defined by ISO, EN and ASTM standards. BioD products are food grade and Recyclable too ! Tested in reputed labs like IIP, CIPET & Intertek labs and BioD works with different types of polymers from PE, PP, PET, PS, HIPS to PVC to BoPET, BoPP etc across India and the World.

A few segments & Countries working with BioD are Food Film packaging, PET Bottles HDPE Pesticide Containers, Mulch film , PP Cosmetic bottles, PS cutlery, PE Shopping,Carry and Biomedical & Garbage bags, PP Fertilizer & Chemical bags in countries such as Sri Lanka, Russia, Middle East, Canada, USA.

IEMs signed in the Plastics segment during April 2019 to May 2019

IEM No.	Company Name	State	Item of manufacture
942	Shakti Polyweave Private Limited	Gujarat	Technical textiles
790	Aculife Healthcare Private Limited	Gujarat	Plastic containers and closures
957	Shankar Packagings Limited	Gujarat	FIBC
985	Flair Writing Instruments Limited	Gujarat	Writing instruments
869	Kris Flexi Packs Private Limited	Gujarat	Poly rolls
843	Ajit Industries Private Limited	Haryana	Self-adhesive tapes
926	Saraswati Plastotech India Private Limited	Jammu & Kashmir	Polycarbonate sheets
786	Dr. Bloodo	Madhya Pradesh	Plastic tubes
901	Shriji Polymers	Madhya Pradesh	Plastic containers and closures
898	Alpha Foam Limited	Maharashtra	Bubble sheet
940	Kanpur Packagers Private Limited	Uttar Pradesh	Raffia bags
841	Chemical Process Piping Private Limited	West Bengal	FRP products
936	Auro Plastic Injection Moulders Private Limited	Jharkhand	Auto parts of plastic

Source: Ministry of Commerce & Industry, Government of India

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Know Your COA Member

Interview with Shyam Tibrewal, CMD, Mayur Wovens Pvt. Ltd, COA Member, Western Region

Established since 1970 as a textile processing house, Mayur Wovens Pvt Ltd ventured into the new age of plastics in the year 1985, diversifying into PE Woven Business using Flat Looms due to environmental concerns related to Textile & Chemicals Manufacturing process.

Amongst the most respected names in the industry today, Mayur Wovens boasts 5 state of the art manufacturing facilities equipped with the latest technology, machinery and infrastructure, the company produces a diverse range of woven industrial products used world over in diverse applications. Committed to the principles of innovation, consistency and reliability that form the bedrock of the company, the company is most amongst the most well-known brands for woven products, catering to distinguished clientele across the world. Its team of over 1200 professional and skilled personnel focused on delivering customized solutions in the woven PP|PE Industry are led under the astute guidance of the company's CMD, Mr. Shyam Tibrewal. Foreseeing the future of plastic woven products and its applications, the company adopted a unique approach by specializing in providing customized solutions to the emerging woven packaging industry globally rather than commoditizing its product offering. A customer-centric approach to business, high quality products, superior service, competitive pricing, technologically advanced manufacturing and committed delivery has ensured that the company always remains ahead of its game.

Mr. Shyam Tibrewal, Chairman and Managing Director of Mayur Wovens Pvt Ltd is a COA member, Western Region, at Plexconcil. A well-recognized and well-respected industry veteran, he is credited for working tirelessly towards the upliftment of the Plastics industry in Gujarat State and has played an active role in the establishing of Plexconcil's regional office in Ahmedabad. Today, he talks about his journey and shares with us valuable insights into the making of his success story.

Q: How has the Plastics industry evolved over the decades since you started your career?

A: Plastics touch every sphere of life & are indispensable to modern day living. Today, the industry has witnessed exponential growth, particularly of Commodity Plastics. From 1980s and till date, consumption has risen from below 0.5MnTA to above 12 MnTA. And although a late starter, the indusrty has caught up with the global industry & over the past decade, has grown at a phenomenal pace alongside India's growth story.

The industry's growth over the years can be especially attributed to the easy availability of raw material with the advent of Reliance Industries into the segment. Self-sufficiency on account of raw material, a supportive policy regime & a facilitative business environment gave the industry the necessary boost for growth and drove investment plans in downstream processing.

Regulatory initiatives – softening JPMA, promoting energy efficient building codes, aseptic milk packaging, mandatory unitized packaging of oil & other food products susceptible to adulteration, supporting mandatory standardization of products etc. taken by Govt also opened up huge opportunities for plastics in the end use market. However, back in the day, the plastic processing industry was extremely fragmented, restricted to selective places, operated at sub-optimal scales using dated technology, which, in turn, limited its international competitiveness & hence, exports. Nevertheless, a nation-wide presence,

cross-segment production and rising demand & application has resulted in the industry being one of the largest employment generators and a significant contributor to the Indian economy currently.

Export growth has also leap-frogged due to the high cost of labour in developed countries that helped us increase our production capacities to meet growing global demands by shifting to better economies of scale with high output, energy efficient & technologically advanced machines producing globally competitive products. Upgradation in plastic processing machinery manufacturing has further propelled its growth to highest international standards. Multinational companies entering Indian market through mergers & acquisitions are also setting benchmarks in terms of scale of production along with technological advancements in machinery & process to consistently meet quality norms and long-term sustainability.

Q: What were the challenges that the industry faced in the early years? What are the roadblocks typically faced by the industry today?

A: The major challenge in the early years was shortage of raw material leading to a restrictive quota system & large dependency on imports.

Furthermore, with industry just at a nascent stage, product development and acceptance of plastic products as a replacement for traditional products was a challenge as well. Today the industry faces major challenges in areas such as volatile pricing of basic raw material, exchange rate fluctuation, rising input costs & capital investment and lower conversion, emerging threat of USA's import restrictions & tariff hike etc. Ecological concerns & sustainability of plastics in the long run are also issues of concern especially with the growing unpopularity of plastics that is seen as a major pollutant & its use being erroneously perceived as harmful to environment.

However, I believe that after four decades of its existence, the industry needs to look at consolidating resources and product innovation for future sustainability.

Q: What, in your opinion, are the strengths of the Indian plastics manufacturers in the global market place? What are your suggestions to improve our export potential and market share globally?

A: Ingenuity, Flexibility and Hard Work is what defines today's Indian Plastic Processors and these are strengths that would further the industry's growth. Economic scale of production, competitive quality, lower labour cost & flexibility to cater the global demands in addition to scalability, control over distribution channels will also help increase our global market share. Some Govt. Initiatives like easier credit insurance, globally comparable trade financing costs would also help overcome financing challenges that our industry faces.

Q: Which countries are the biggest competitors for your product category? Why?

A: China, Turkey, Vietnam, Thailand. Different countries compete in different products segments, in different parts of the world. China / Mexico have a strategic advantage in the US markets while Turkey enjoys an edge over India in the EU region. These countries have much shorter transit times thus reducing lead times and need for larger inventory. Overall efficiency and awareness levels of the labour force in these markets also make them very competitive. These are areas that our industry needs to improve upon.

Q: What are the unique opportunities or advantages for plastics manufacturing sector in Gujarat?

A: Some of the advantages that the State offers are:

- Large end use market for all major plastics products.
- Significant basic raw material availability with presence of OPAL and Reliance
- Plastics Processing Machinery Hub.
- Supportive Govt policy regime and a facilitative business environment.
- Excellent World class Ports to facilitate exports.
- Large number of Testing, R&D & Technical Educational facilities
- Very Strong Engineering Industry in Ahmedabad and Rajkot,
- Good Power Supply
- A large pool of talented professionals and skilled workforce.

These are all unique advantages that perhaps no other state enjoys.

Q: In your opinion, what further measures/ Government policies are needed to boost the export segment?

A: Exports incentives and a facilitative fiscal regime including sops for FDI, mergers & acquisition with multinationals will attract investments & promote exports.
Credit Insurance, Financing Costs and Manpower Efficiency / Inflow should be the biggest thrust areas that will help increase our global market share. Simplification of paperwork and export formalities would bring much needed respite to exporters.

Q: What is the short term and long-term impact of the increasing ban on plastics? How can our industry prepare for the changing global policies in plastics import?

A: Use of Plastic over last two decades has become an essential part of life and while it contributes to our economic growth, its impact on the environment remains. While banning plastics may be a boon for the environment, it is a

bane for the economy.

Increasing ban on plastics will definitely lower the plastics consumption across segments. The industry employs has a huge manpower. Around 85-90% of the industry comprises the MSME industries. A ban on the plastics could easily affect the industry; not just trade and but employment for the lakhs of people engaged in it.

Without an effective, alternate and viable solution, a ban on Plastic can make use of alternates costlier inducing inflation, besides causing immense inconvenience in terms of packaging, transportation, storage, etc.

A ban, in my opinion, is not the best way to deal with a problem. It is more of a short-term measure until a viable solution is found for the long run. A short-term vision can be disastrous to especially the many lives engaged in the industry. Hence, we urge the Government to take a holistic view of the environmental and economic concerns and work towards finding a balanced solution that would help the trade and our environment in the long run.

Why become a Plexconcil Member?

Established since 1955, the Plastics Export Promotion Council, PLEXCONCIL, is sponsored by the Ministry of Commerce and Industry, Department of Commerce, Government of India. PLEXCONCIL is a non-profit organization representing exporters from the Indian plastics industry and is engaged in promoting the industry exports.

The Council is focused on achieving excellence in exports by undertaking various activities and initiatives to promote the industry. The Council undertakes activities such as participation at international trade fairs, sponsoring delegations to target markets, inviting foreign business delegations to India, organising buyer-seller meets both in India and the overseas etc.,

The Council also routinely undertakes research and surveys, organizes the Annual Awards to recognize top performing exporters, monitors the development of new technology and shares the same with members, facilitates joint ventures and collaboration with foreign companies and trade associations as well as represents the issues and concerns to the relevant Government bodies.

The Council represents a wide variety of plastics products including – Plastics Raw Materials, Packaging Materials, Films, Consumer Goods, Writing Instruments, Travel ware, Plastic Sheets, Leather Cloth, Vinyl Floor Coverings, Pipes and Fittings, Water Storage Tanks, Custom made plastic Items from a range of plastic materials including Engineered Plastics, Electrical Accessories, FRP/GRP Products, Sanitary Fittings, Tarpaulins, Laminates, Fishing Lines/Fishnets, Cordage/Ropes/Twines, Laboratory Ware; Eye Ware, Surgical/Medical Disposables.

Membership Benefits

- Discounted fees at International Trade Fairs and Exhibitions
- Financial benefits to exporters, as available through Government of India
- Disseminating trade enquiries/trade leads
- Instituting Export Awards in recognition of outstanding export performance
- Assistance on export financing with various institutions and banks
- Networking opportunities within the plastics industry
- Listing in PLEXCONCIL member's directory

S. No.	Company Name	Communication Address	Director	Email
1	SAMAY INDUSTRIES	HOUSE NO. 5-17-33, JANSEVA KIRANA, SAMATA NAGAR, ADALAT ROAD, AURANGABAD-431001	SHAIKH KALIM ABDUL SATTAR	mustafa.ahmed10@gmail.com
2	HIMALAYAN SKINCARE PVT. LTD.	A-604 SUKH SAGAR APARTMENT I. P. EXTENSION PARPARGANJ-110092	SURESH KUMAR SINGHAL	accounts@himalayan-group.co.in
3	NIRMAL POLY PLASTIC INDUSTRIES	GAT NO. 359/11, NANEKARWADI, CHAKAN, PUNE-412501	ANIKET Y BHOSALE	shrikant.nirmalpolyplastic@gmail.com
4	ONETAPE INDIA PVT LTD	PLOT NO. 3004, PHASE - IV, GIDC, NR. KRISHNA CERAMICS,WADHVAN-363035	SHAILESH C SHAH	general3790@gmail.com
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6	ASIA POLY FILMS INDUSTRIES	SR. NO. 462, BHIMNATH MAHADEV RD., RAJKOT-MORBI HIGHWAY RD., AT-LAJAI, MORBI, RAJKOT-363641	DIPESHKUMAR M PATEL	asiapolyfilm@gmail.com
7	ANJANI INTERWEAVE	A,949,7, KIM MANDVI ROAD, TADKESHWAR,	PUNEET M. SHARMA	info@anjaniinterweave.com
8	MAXSUN POLYSHRINK PRIVATE LIMITED	BEHIND 66 KVA SUBSTATION, VILLAGE MANDLIKPUR, JETPUR,	RAJKOT -360370	KISHORBHAI SENJALIYA
9	SREEMA FILAMENTS PRIVATE LIMITED	10/44-1, KOVITHANVILAI ROAD, ERUMBUKADU POST, NAGERCOIL, KANYAK UMARI-629004	V U Sajay	accsreemafilaments@gmail.com
10	BANGALORE POLYCOTTERS PVT LTD	B-202, ROAD NO 09,V K I AREA, JAIPUR-302013	DEEPAK AGARWAL	bpplvp@gmail.com
11	JAIN BULK PACK	229, NEW CLOTH MARKET, O.S.RAIPUR GATE SARANGPUR, RAIPUR, AHMEDABAD-380002	ANIL S GOYAL	dgftho@champalal-group.com
12	KAP PLASTIC INDUSTRIES	B/8 NANDKISHORE INDUSTRIAL ESTATE, MAHAKALI CAVES RD, NEAR PAPER BOX CO, MUMBAI-400093	KAPISH D SAINANI	info@kapplastic.com
13	ACEE TUBES PVT LTD	NO. 3 & 4 MAHALAKSHMI NAGAR , NOOMBAL MAIN ROAD VANAGARAM,CHENNAI-600077	KULANDAIVEL PADMANATHAN	aceetubes@gmail.com
14	PACT CLOSURE SYSTEMS (INDIA) PRIVATE LIMITED	SURVEY NO. 35 & 36, SOUKYA ROAD, KACHERKANAHALLI HOSAKOTE TALUK,BANGALORE-560067	BIMALESH BARAL	damodar.sahu@pact-group.com
15	EVERLAST COMPOSITES LLP	C-2901 OBEROI WOODS, MOHAN GOKHALE ROAD, NR. INTERNATIONAL BUSINESS PARK, GOREGAON EAST, MUMBAI 400063	DILIP A DEDHIA	rajesh@everlastcomposites.com
16	INNOVATIVE TRADERS	B-802, RAVECHI HEIGHTS, PLOT NO.25, SECTOR 07, KHARGHAR NAVI MUMBAI-410210	MUKESH M AHUJA	innovativetraders22@gmail.com
17	PURSUIT INDUSTRIES PRIVATE LIMITED	5TH FLOOR, FLAT NO. 502, THE ATLANTIS TOWER D, AMBATALAWADI, KATARGAM, SURAT-395004	JITENKUMAR B PATEL	info@pursuitind.com
18	KINECO KAMAN COMPOSITES INDIA PVT. LTD.	PLOT NO 60, PILERNE INDUSTRIAL ESTATE,PILERNE BARDEZ-403511	SHEKHAR R SARDESSAI	shekhar@kinecogroup.com
19	DELTA THERMOFORMERS	LAXMI INDUSTRIAL ESTATE, GALA NO. 101, 102, 103, 1ST FLOOR, SATIVALI ROAD, VASAI (E), THANE-401208	Mohammed Arif Ansari	deltath@hotmail.com
20	SIVA TRADE & PACK	4TH FLOOR, T2 GOPURA APARTMENT, NORTH HIGH GROUND ROAD ,PALAYAMKOTTAI 627002	R GANESH BABU	sivatradeandpack.ho@gmail.com
21	SHANKY TEXPLAST	WAREHOUSE NO.2, SURVEY NO.155, PAIKI, KIDANA, NH-8, KACHCHH,GANDHIDHAM-370230	RAHUL M YADAV	shankytexplast@gmail.com
22	CREATIVE PLASTIC PACKAGING PRIVATE LIMITED	PLOT NO. 190, SECTOR -3, INDUSTRIAL ESTATE IMT MANESAR ,GURGAON-122051	POOJA JAIN	pooja.jain.re@gmail.com
23	HAMJANI PLASTIC INDUSTRIES	S.NO.267/P,268/1,268/2,P.NO.4/A,5, DANILIMDA SIM, B/HR. V. DENIM ROAD, HOKABAJ FAC. RD. ILABEN ESTATE, DANILI, AHMEDABAD-380028	USMANBHAI N MEMON	hamjaniplasticindustries@gmail.com
24	MANJUSHREE INNOVATIONS PRIVATE LIMITED	IOC ROAD,GOURIPUR,SHILASINDURIGHOPA COLLEGE NAGAR NORTH GUWAHATI-781031	SHEKHAR AGARWAL	shekhar.agarwal@manjushreegroup.com
25	SHREE KUSHAL POLYFAB LLP	PLOT NO.89 & SURVEY NO.359, SOPAN KESAR INDUSTRIAL HUB, NR. KESAR CITY, MORAIYA SANAND,	ANKIT V BHANSALI	accounts@shreekushal-polyfabllp.com
26	SHRIANAND POLY	BEHRAMPUR ROAD, BEGUMPUR KHATOLA, NEAR SARASWATI INTERNATIONAL SCHOOL, GURGAON-122001	ISH CHAUDHARY	info@sapoly.com
27	TERACOM FRP PRIVATE LIMITED	PLOT NO.8, GALI NO. 5, SHIVSHAKTI ENCLAVE, SALARPUR, SECTOR-81, NOIDA-201301	ATUL KUMAR SHARMA	sharma_ak67@yahoo.co.in

New Members

28	PI POLYBLENDZ PRIVATE LIMITED	C-1/1, MANILALMUKHI ESTATE, B/H GAYATRI MANDIR NH8, AHMEDABAD-380026	ANKUR M THAKUR	athakur@pippl.co.in
29	ITZU INTERNATIONAL PRIVATE LIMITED	PLOT NO-2, J-EXTENSION, LAXMI NAGAR,110092	KANUSH DHAWAN	kanush@itzuinternational.com
30	SADHANA PACKAGING PRIVATE LIMITED	64 & 64A, INDUSTRIAL AREA, RICHHAI,JABALPUR-482010	BAKUL JAIN	bakuljain1990@gmail.com
31	GALORE IMPEX	B-14, RAJLAXMI BUNGALOWS, NEAR PANAS GAM, CITYLIGHT,SURAT-395007	HITESH N PATEL	galoreimpexsurat@gmail.com
32	GANESH EXPORTS	309, ASHIRWAD INDUSTRIAL ESTATE NO. 4, RAM MANDIR ROAD, GOREGAON WEST,MUMBAI-400104	PANDURANG S POKHARKAR	ganesh.export@gmail.com
33	DUTTAKRUPA INDUSTRIES	BLOCK NO.5, RASULJIS CHAWL, OPP. ARPITA COMPLEX, ALEMBIC ROAD,BARODA-390003	KSHAMA R PARAB	duttakrupaindustries@gmail.com
34	SUHANA GLOBAL PRIVATE LIMITED	BETULIA CHAK, LALPUR BHAGBANPUR, WB-721601	SEKH HARUN RASID	jbanerjee189@gmail.com
35	FAIRDEAL JUMBO PACKAGING PVT LTD	PLOT NO.174 PAIKI, OPP. CLARIS, VILLAGE:CHACHARWADI VASNA, SARKHEJ-BAVLA ROAD, TA. SANAND AHMEDABAD-382213	SANJAY Z SANKLECHA	info@fairdealjumbo.com
36	CHANDANMANI INDUSTRIES	PLOT NO. E-298, SANAND-2, ENGG., ESTATE, VILLAGE HIRAPUR, BOL GIDC, SANAND, 382110	VIJAY H SHAH	info@chandanmani.com
37	ROTOTON POLY PACK PVT LTD	20, SAMRAT IND. AREA, BH S.T. WORK SHOP GONDAL RD,	VASANT M GADESHA	contact@rototon.in

Name	Eshwar Prasad
Company	Primo Exim LLC
Address	270 Drummen Court, Sandy Springs, Atlanta, GA 30328, US
Email	eshwar@primoexim.com
Contact	+1 770 833 1900; +91 98844 47867 (India)
Enquiry	Buyer is interested in importing premium metal pens (HS Code 9608.10.92) from India

Name	Dinidu Wathulanda
Company	Bionique Lanka (Pvt) Ltd.
Address	242/14, Hill Crest Estate, Makandana,, Madapatha, Piliyandala, Sri Lanka
Email	bioniquelk@gmail.com
Contact	+94 77 333 1980
Enquiry	Buyer is interested in importing Polypropylene and Polystyrene.

Name	Johann Tranchell
Company	Polydime International (Pvt) Ltd.
Address	122, Startford Avenue, Colombo, Sri Lank
Email	johann@polydime.com
Contact	+94 777 7910 14
Enquiry	Buyer is interested in importing Masterbatches.

Name	Chaminda Nalagamage
Company	Innodata
Address	5, Mihindu Mawatha, Colombo, Sri Lanka
Email	csnalagamage@innodata.com
Contact	+94 77 363 5530
Enquiry	Buyer is interested in importing transparent food containers with a lid (food grade containers made of PP).

Name	Anton Ruwan
Company	Berney Lanka Services
Address	19/18, Dungalpitiya, Thalahena, Negombo, Sri Lanka
Email	berneylankaservices@gmail.com
Contact	+94 77 3030816
Enquiry	Buyer is interested in recycled plastics.

Business Inquiries

Name	Sunil Costa
Company	Modern Pack Lanka (Pvt) Ltd.
Address	418, Thalagala, Gonapola, Sri Lanka
Email	sunilc@modernpack.lk
Contact	+94 77 3951489
Enquiry	Buyer is interested in importing Polypropylene and Polystyrene.

Name	Prabath Gajanayake
Company	Eco Films (Pvt) Ltd.
Address	817/D, Ganermulla Road, Weligampitiya, Ja-Ela
Email	prabath@theecofilms.com
Contact	+94 77 2663929
Enquiry	Buyer is interested in importing plastics raw materials.

Name	Stefan Tranchell
Company	Packaging Alliance (Pvt) Ltd.
Address	23, Weherakanda Road, Baddegana, Pita Kotte
Email	sales@packagingalliance.lk
Contact	+94 767 806 412
Enquiry	Buyer is interested in importing plastics raw materials.

Name	Mario Schilling
Company	Make Importaciones Ltda
Address	Waterloo 539 - Las Condes, Chile
Email	mario@casia.cl
Contact	56 9 97339888
Enquiry	Buyer is interested in importing Jumbo Bags (HS Code 3923.29.90 and 6305.32.00) from India.

Name	Neil McCracken
Company	4 Front Development
Address	PO Box 16, 16122, Nobby Beach Queensland Australia
Email	neil.mccr@yahoo.co.uk
Contact	0444545156
Enquiry	Buyer is interested in importing HDPE products used for garden and landscaping from India

Name	David Majesz
Company	Caseling Inc
Address	9 Nicklesburg Rd # 201 Monroe NY 10950
Email	david@caseling.com or yorksalesys1@gmail.com
Contact	718-913-4883
Enquiry	Buyer is interested in importing EVA hard cases (HS Code 4202.92.9700) from India

Name	Carlos Siu
Company	Primazol C.A.
Address	J-29647989-5, Av. 67 Nro 148A-99 Zona Industrial 2da Etapa, Maracaibo, Venezuela
Email	carlos.siu@primazol.com
Contact	0261-7140125 / 7140128
Enquiry	Buyer is interested in importing Polypropylene from India

International Events Calendar

INTERNATIONAL EVENTS

PLEXCONCIL would be facilitating Indian participation at 12 international events. The planned events for 2019-20 are enlisted below and have been duly approved by the Government of India for financial assistance under the MAI Scheme. Separately, the council has also planned for taking business delegation to some countries.

April 2019	May 2019	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019	January 2020	February 2020	March 2020
PLASTIMAGEN FEI PLAST	PLASTPOL	COMPLAST MYANMAR		COMPLAST SRI LANKA		K FAIR VIETNAM PLAS	COMPLAST SOUTH AFRICA	PLAST EURASIA		INTERPLASTICA	INTERNATIONAL HOME HOUSEWARE SHOW JEC WORLD CAPINDIA

Source: PLEXCONCIL

Other Important Industry Events For Plastics (September 2019 - October 2019)

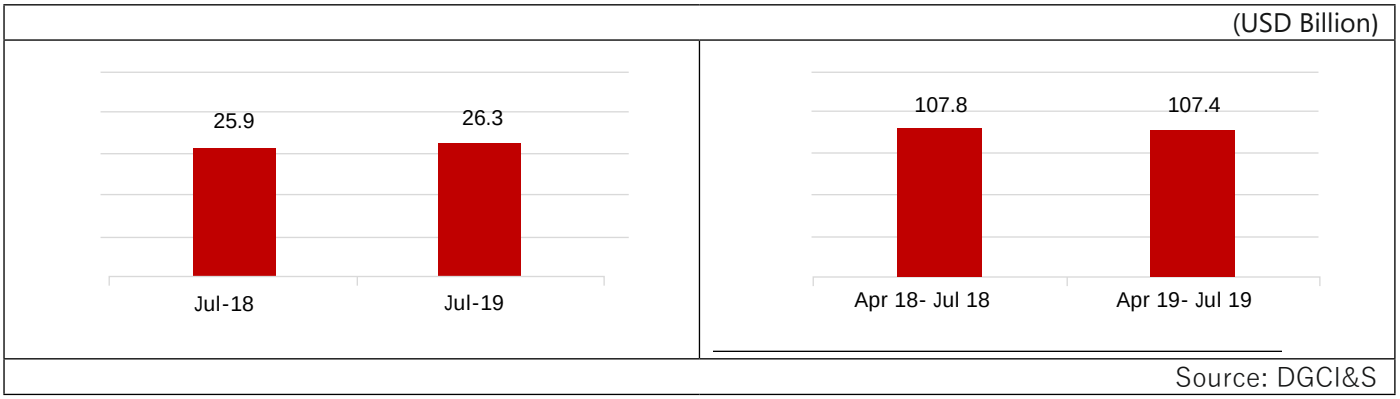
Vietnam Plas	Asean	Vietnam	October 3 -9, 2019
K show Germany (K 2019)	Europe	Germany	October 16 -23, 2019

ANALYSIS OF INDIA'S PLASTICS EXPORT, JULY 2019

TREND IN OVERALL EXPORTS

India reported merchandise exports of USD 26.3 billion in July 2019, up 1.7% from USD 25.9 billion in July 2018. Cumulative value of merchandise exports during April 19 – July 19 was USD 107.4 billion as against USD 107.8 billion during the same period last year, reflecting a decline of 0.3%.

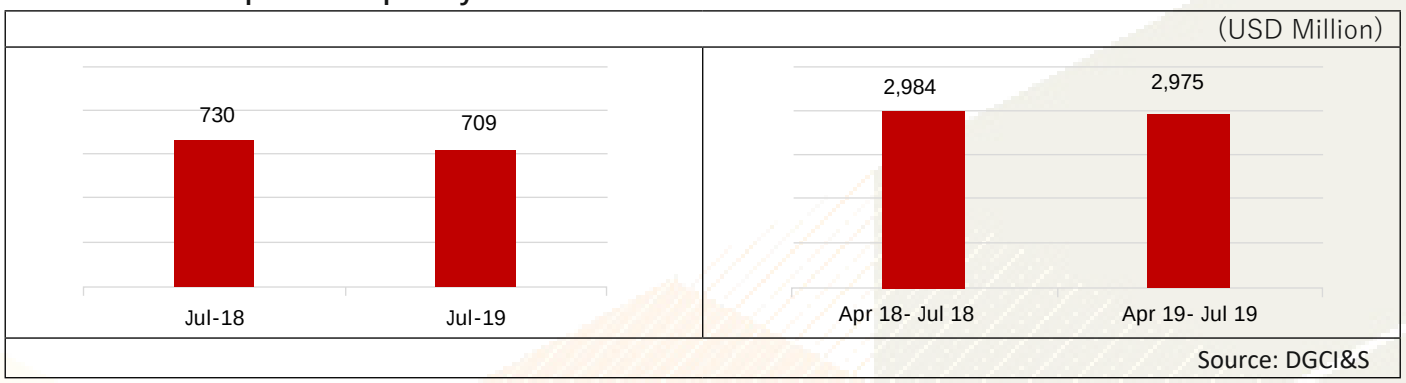
Exhibit 1: Trend in overall merchandise exports from India



TREND IN PLASTICS EXPORT

During July 2019, India exported plastics worth USD 709 million, down 2.9% from USD 730 million in July 2018. Cumulative value of plastics export during April 19 – July 19 was USD 2,975 million as against USD 2,984 million during the same period last year, registering a negative growth of 0.3%.

Exhibit 2: Trend in plastics export by India



- Plastics formed 2.77% of India's overall merchandise exports in April 2019 – July 2019
- India exported plastics to 205 countries in April 2019 – July 2019
- United States, China and United Arab Emirates were the top three buyers of plastics from India in April 2019 – July 2019

PLASTICS EXPORT, BY PANEL

In July 2019, some of the product groups that exhibited good performance were: human hair (up 34.6% year-on-year); other plastic items (+24.9%); moulded & extruded goods (+18.7%); packaging materials (+15.4%); optical items (+8.4%); and plastic sheet, film, plates etc (+7.3%). However, plastic raw materials witnessed year-on-year decline of 19.3%; along with stationery/office/school supply (-5.7%).

Exhibit 3: Panel-wise % growth in plastics export by India

Panel	Jul-18	Jul-19	Growth	Apr 18-Jul 18	Apr 19-Jul 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
Plastic raw materials	362.95	293.00	-19.3%	1,444.61	1,249.47	-13.5%
Plastic sheet, film, plates etc	114.95	123.36	7.3%	481.55	510.50	6.0%
Moulded & extruded goods	85.23	101.19	18.7%	349.82	443.68	26.8%
Packaging materials	63.92	73.77	15.4%	264.30	276.38	4.6%
Optical items (incl. lens etc)	39.05	42.31	8.4%	161.16	162.30	0.7%
Other plastic items	28.61	35.72	24.9%	119.28	156.70	31.4%
Stationery/Office/School Supply	20.24	19.10	-5.7%	86.65	83.69	-3.4%
Human hair, products thereof	15.51	20.88	34.6%	76.50	92.25	20.6%
	730.46	709.33	-2.9%	2,983.86	2,974.98	-0.3%

Note: Plastics are segregated under eight panels by DGCI&S
Source: DGCI&S

PLASTICS EXPORT, BY REGION

India's plastics export in July 2019 did well in regions like North-East Asia (up 24.6% year-on-year); Commonwealth of Independent States (+24.1%); and North America (+21.5%). Export growth was negative in territories like Latin America & Caribbean (-38.1%); ASEAN + 2 (-13.7%); Africa (-13.1%); Middle East (-11.0%); South Asia (-8.3%); and European Union (-4.3%).

Exhibit 4: Region-wise trend in plastics export by India

Region	Jul-18	Jul-19	Growth	Apr 18-Jul 18	Apr 19-Jul 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
European Union (EU)	148.77	142.31	-4.3%	602.33	589.05	-2.2%
Middle East	114.64	101.98	-11.0%	480.37	476.17	-0.9%
North-East Asia	92.62	115.42	24.6%	411.88	444.10	7.8%
North America	92.59	112.52	21.5%	394.91	473.82	20.0%
Africa	95.05	82.57	-13.1%	374.57	360.57	-3.7%
South Asia	65.79	60.31	-8.3%	289.53	262.86	-9.2%
ASEAN + 2	61.06	52.72	-13.7%	219.83	199.29	-9.3%
Latin America & Caribbean (LAC)	51.02	31.60	-38.1%	168.53	123.11	-27.0%
CIS	5.92	7.35	24.1%	25.53	36.01	41.0%
Others	3.01	2.56	-14.8%	16.39	10.01	-38.9%
	730.46	709.33	-2.9%	2,983.86	2,974.98	-0.3%

Source: DGCI&S

PLASTICS EXPORT, BY DESTINATION COUNTRY

During July 2019, 13 out of the top 25 destination countries recorded year-on-year growth in plastics export from India. Exports to United States, Canada, China, Saudi Arabia, South Africa and Nepal witnessed high growth rates ranging between 20-30%, during the period.

On a cumulative basis, during April 19 – July 19, 10 out of the top 25 destination countries recorded year-on-year growth in plastics export from India. Exports to Canada, Saudi Arabia and South Africa witnessed high growth rates ranging between 30-60%, during the above period.

Exhibit 5: Top 25 destinations of plastics exported by India

Country	Jul-18	Jul-19	Growth	Apr 18-Jul 18	Apr 19-Jul 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
China	73.49	96.60	31.5%	334.54	362.86	8.5%
United States	74.56	91.21	22.3%	317.35	392.21	23.6%
United Arab Emirates	29.85	32.09	7.5%	148.18	170.08	14.8%
Italy	31.19	23.36	-25.1%	128.84	105.12	-18.4%
Germany	25.27	25.83	2.2%	104.60	103.38	-1.2%
Bangladesh	28.58	19.69	-31.1%	117.14	95.42	-18.5%
Turkey	28.20	22.29	-20.9%	109.41	75.13	-31.3%
United Kingdom	19.44	22.56	16.1%	81.33	92.49	13.7%
Nepal	17.06	22.56	32.2%	75.42	84.94	12.6%
Vietnam	15.45	14.26	-7.7%	58.78	50.28	-14.5%
France	16.21	17.91	10.4%	61.31	65.07	6.1%
Indonesia	19.61	9.77	-50.2%	50.34	31.38	-37.7%
Egypt	14.38	6.23	-56.7%	53.38	34.31	-35.7%
Belgium	11.37	9.78	-13.9%	45.00	43.37	-3.6%
Japan	11.24	8.12	-27.7%	42.41	35.21	-17.0%
Nigeria	14.63	8.91	-39.1%	57.43	33.67	-41.4%
Pakistan	6.41	5.73	-10.6%	45.09	34.18	-24.2%
South Africa	8.70	10.95	25.8%	35.45	55.23	55.8%
Israel	10.83	6.69	-38.2%	36.93	33.42	-9.5%
Mexico	9.33	10.53	12.9%	45.34	39.69	-12.5%
Kenya	9.64	10.78	11.9%	42.79	45.51	6.3%
Spain	7.35	8.56	16.5%	39.56	38.77	-2.0%
Sri Lanka	9.98	8.33	-16.6%	37.97	32.21	-15.2%
Canada	8.70	10.78	23.9%	32.22	41.93	30.1%
Saudi Arabia	6.59	8.54	29.5%	31.19	42.46	36.1%

Note: Top 25 destinations based on 2018-19 plastic exports by India
Source: DGCI&S

India exported plastics to 189 countries in July 2019 as compared to 182 countries in July 2018.

Exhibit 6: Panels with details of % growth seen in top 10 export destinations

Panel	Country	Apr 18-Jul 18 (USD Mn)	Apr 19-Jul 19 (USD Mn)	Growth (%)
Plastic raw materials	China	263.07	274.22	4.2%
	Italy	92.09	63.50	-31.0%
	Turkey	93.02	66.47	-28.5%
	Bangladesh	85.41	63.62	-25.5%
	United Arab Emirates	73.04	62.27	-14.7%
	United States	50.54	50.89	0.7%
	Vietnam	51.09	41.91	-18.0%
	Nepal	44.14	55.02	24.6%
	Indonesia	40.07	18.52	-53.8%
	Pakistan	41.96	31.22	-25.6%
Plastic sheet, film, plates etc	United States	70.90	88.54	24.9%
	United Arab Emirates	19.15	23.00	20.1%
	Germany	23.60	23.66	0.2%
	South Africa	21.44	22.40	4.5%
	Nigeria	27.54	11.80	-57.2%
	Italy	18.24	16.97	-7.0%
	United Kingdom	15.06	19.60	30.1%
	Bangladesh	15.14	11.43	-24.5%
	Mexico	14.70	13.00	-11.6%
	Spain	12.19	14.23	16.7%
Moulded & extruded goods	United States	77.22	130.49	69.0%
	United Arab Emirates	21.01	39.40	87.5%
	United Kingdom	18.00	20.46	13.7%
	Germany	18.47	16.65	-9.9%
	Canada	13.96	20.07	43.8%
	Sri Lanka	8.57	4.15	-51.6%
	Spain	7.73	6.65	-14.0%
	Nigeria	6.54	6.04	-7.7%
	Saudi Arabia	5.73	7.68	33.9%
	Brazil	5.29	8.33	57.5%
Packaging materials	United States	47.64	58.72	23.3%
	United Kingdom	22.15	22.30	0.6%
	United Arab Emirates	13.93	16.36	17.5%
	Netherland	10.39	9.48	-8.8%
	Germany	8.48	6.94	-18.1%
	Belgium	7.73	2.93	-62.1%
	France	6.37	5.79	-9.1%
	Spain	5.75	5.43	-5.6%
	Djibouti	8.13	6.11	-24.9%
	Nepal	6.01	4.69	-22.0%

Note: Top 10 destinations based on India's 2018-19 exports under the eight plastic product panels
Source: DGCI&S

Panel	Country	Apr 18-Jul 18 (USD Mn)	Apr 19-Jul 19 (USD Mn)	Growth (%)
Optical items (incl. lens etc)	France	38.30	46.60	21.7%
	Germany	17.12	16.78	-2.0%
	United Kingdom	12.73	13.32	4.6%
	United States	11.81	3.87	-67.2%
	United Arab Emirates	5.46	7.87	43.9%
	Netherland	7.82	7.19	-8.0%
	Poland	6.76	6.10	-9.8%
	Italy	3.15	9.06	187.3%
	Russia	0.36	5.44	1403.8%
	Israel	2.02	2.77	37.3%
Other plastic items	United States	28.90	29.30	1.4%
	Belgium	11.70	8.65	-26.0%
	United Arab Emirates	9.90	15.98	61.4%
	South Africa	3.01	17.28	474.9%
	United Kingdom	2.62	6.04	130.3%
	Italy	3.61	4.98	37.7%
	Germany	3.69	5.90	59.9%
	Poland	1.95	2.85	45.6%
	Nepal	2.83	2.83	-0.1%
	Saudi Arabia	2.93	3.42	16.6%
Human hair, products thereof	China	45.94	60.72	32.2%
	Myanmar	5.98	3.95	-33.9%
	United States	5.47	5.58	1.9%
	Tunisia	3.89	4.92	26.5%
	Hong Kong	2.71	4.79	76.6%
	Bangladesh	2.42	1.80	-25.8%
	United Arab Emirates	1.97	1.39	-29.5%
	Vietnam	0.65	1.86	184.3%
	Indonesia	0.85	0.73	-14.6%
	Italy	1.30	0.84	-35.3%
Stationery/Office/School Supply	United States	24.87	24.82	-0.2%
	United Arab Emirates	3.71	3.81	2.8%
	United Kingdom	5.13	4.64	-9.5%
	Thailand	3.98	3.26	-18.1%
	Algeria	1.83	3.02	65.4%
	Bangladesh	1.73	2.31	33.6%
	Germany	1.97	1.78	-9.8%
	Mexico	1.96	1.22	-37.8%
	Latvia	1.95	0.96	-51.0%
	Nepal	1.56	1.60	2.4%

Note: Top 10 destinations based on India's 2018-19 exports under the eight plastic product panels
Source: DGCI&S

Export Performance

ANNEXURE-I

Trend in overall exports by India

Month	2018-19 (USD Bn)	2019-20 (USD Bn)	Growth (%)
April	25.95	26.07	0.5%
May	28.78	30.01	4.3%
June	27.15	25.01	-7.9%
July	25.89	26.32	1.7%
	107.77	107.41	-0.3%

Source: DGCI&S

ANNEXURE-II

Trend in plastics export by India

Month	2018-19 (USD Mn)	2019-20 (USD Mn)	Growth (%)
April	742.66	702.53	-5.4%
May	741.65	830.55	12.0%
June	769.08	732.57	-4.7%
July	730.46	709.33	-2.9%
	2,983.86	2,974.98	-0.3%

Source: DGCI&S

RANG MAHAL

COLOUR MASTER BATCHES

SACHDEVA POLYCOLOR PVT. LTD.

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