PLEXCONCIL - The Plastics Export Promotion Council

PLEXCONNECT

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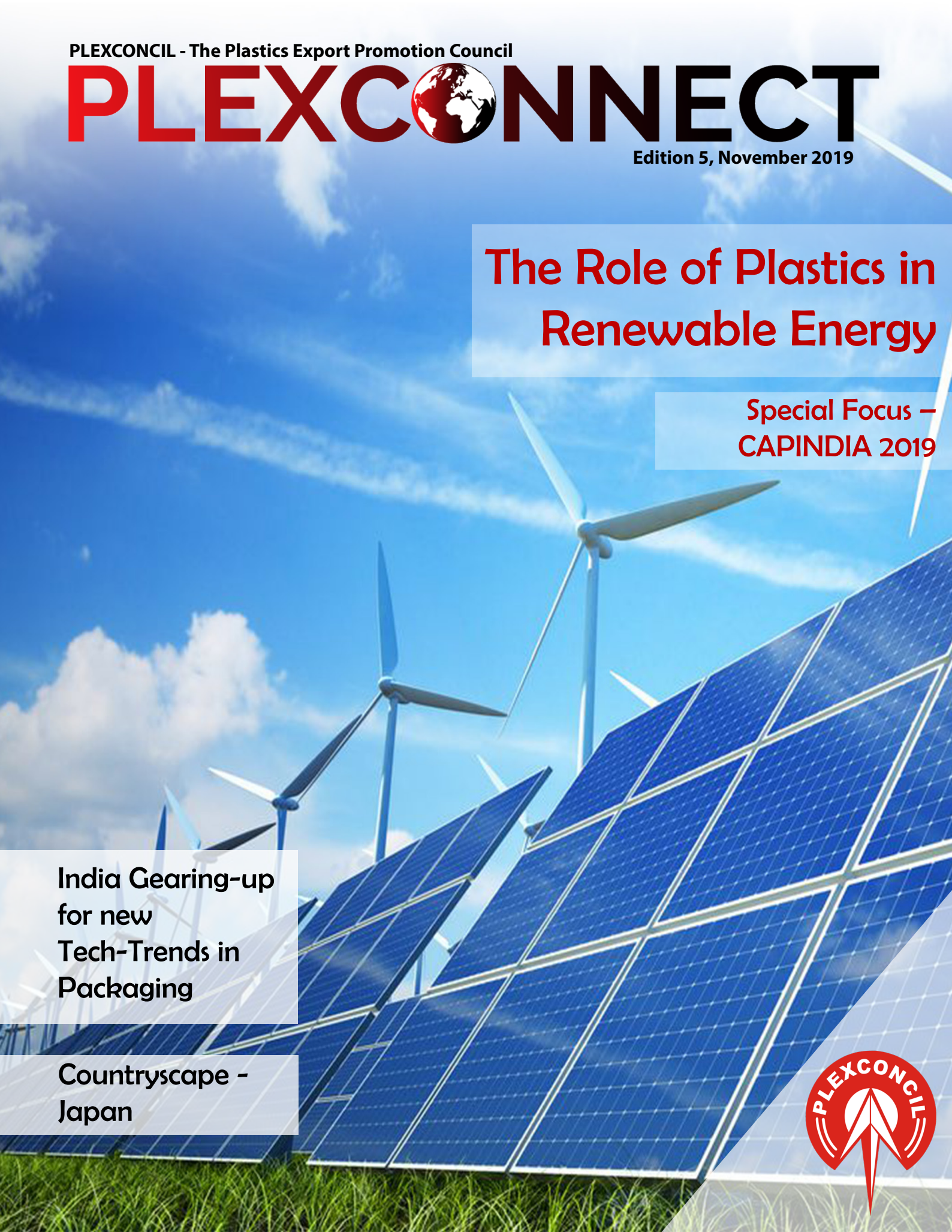

The Role of Plastics in Renewable Energy

Special Focus – CAPINDIA 2019

India Gearing-up for new Tech-Trends in Packaging

Countryscape - Japan

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The Plastics Export Promotion Council

Editor: Sribash Dasmohapatra,
Executive Director, Plexconcil

Associate Editor: Sangita Iyengar

Send in your feedback, comments, suggestions to **editor@plexconcil.org**

The Plastics Export Promotion Council

Head Office (Head Office)
Crystal Tower, Ground Floor, Gundivali
Road No. 3, Off Sir M. V. RoadAndheri (E)
Mumbai - 400069
Tel: 91-22-2683 3951 / 91-22-2683 3952
Fax: 91-22-2683 3953 / 91-22-2683 40572
Email: office@plexconcil.org

Delhi - Northern Region (Region Office)
319, 3rd Floor, Block - E, International Trade
Tower 99, Nehru Place
New Delhi - 110019
Tel: 91-11-26478817 / 26478819
Fax: 91-11-26478821
Email: plexnr@plexconcil.org

Chennai - Southern Region (Region Office)
Rasheed Mension, 3rd Floor, 408 Anna Salai
Chennai - 600006
Tel: 91-44-28292620
Fax: 91-44-28291518
Email: jaswanth@plexconcil.org; dayanidhi@plexconcil.org

Kolkata - Eastern Region (Region Office)
Vanijya Bhavan, , 1/1 Wood Street
Kolkata - 700016
Tel: 91-33-22834497 / 22834498
Fax: 91-33-22834289
Email: nilotpal@plexconcil.org

Ahmedabad – Gujarat Region(Region Office)
909, Safal Prelude Corporate Road,
Prahladnagar Ahmedabad
Gujarat 380 015, INDIA
Tel: 91-79-48010103
Email: naman@plexconcil.org

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Organised by:

PLEXCONCIL The Plastics Export Promotion Council

CHEMEXCIL Basic Chemicals, Cosmetics and Dyes Export Promotion Council

CAPEXIL Chemicals & Allied Products Export Promotion Council

SHEFEXIL Shellac and Forest Products Export Promotion Council

Diversification is integral to the future of any industry. And despite global concerns over plastics, the role that plastics have played in critical industries such as pharmaceutical, medical, food & beverage, etc cannot be undermined. In today's time, it has become increasingly imperative that our industry looks towards future segments to ensure its own sustainability and growth, by exploring newer applications and markets, improving technologies and focusing more towards R&D and innovation.

The recently concluded K 2019 with 3,330 exhibitors from 63 nations proved impressively that plastics continue to be an innovative & indispensable material. But they also unanimously underscored the necessity of having operational circular economies along the complete material chain and to this end presented numerous concrete solutions. Companies struck a nerve with people with this focus as visitors took great interest especially in recycling systems, sustainable raw materials, resource-saving processes.

The Council recently and successfully led its delegation under the India Pavilion at K Fair 2019 as well as led its delegations to Veitnam Plas. The India Pavilion at K 2019 was inaugurated by the Hon'ble Minister for Chemicals and Petrochemicals, Shri D.V. Sadananda Gowda, which indeed was very encouraging for our participants.

During September 2019, India exported plastics worth USD 649 million, down 16.8% from USD 780 million in September 2018. Cumulative value of plastics export during April 2019 – September 2019 was USD 4,324 million as against USD 4,594 million during the same period last year, registering a negative growth of 5.9%. However, the recently announced fiscal measures, policy interventions and market diversification solutions should help the industry stabilize and grow once again in the coming years.

Furthermore, and hopefully, the opportunities presented by the US-China Trade wars, renewed FTA discussions with ASEAN, will bring respite to the much-skewed balance and boost Indian exports within the said regions.

We are now just less than a month away from CAPINDIA 2019. As you would all know by now, CAPINDIA 2019, is in its 5th Edition and has been growing in its stature since it was first held. This year, the response from especially international buyers has been overwhelming and we have already received interest from over 700 buyers from across 58 countries. The CAPINDIA Reverse Buyer Seller Meets have proven immensely successful and this year, we once again to see the event surpass its past achievements. We look forward to your presence at the event and encourage you to take the opportunity to network with the leading buyers attending the event.

In this issue, we examine the Renewables Energy sectors, Solar and Wind, and the potential for plastics in these industries. We also look at trends in packaging, touching upon what is in, what is out and we hope that these will help our readers see where the future of the industry is heading towards. This month's issue also covers the Human Hair and Human Hair Products segment. India is the largest supplier of the raw material for this product segment and yet, success in the value added part of the segment eludes us. Read on to know more. Our focus destination in this month is Japan and as always, we bring you interesting features, latest news and updates from around the globe.

The Hon'ble Union Minister for Commerce and Industry, Shri. Piyush Goyal during a Board of Trade Meet held in September said, "On the export front, we are willing to take bold decisions and steps. The 5 trillion dollar economy cannot be completed unless we once again get back to the 19-20 per cent growth levels. So we are clearly looking at a trillion dollar export in the next five years and its eminently doable, not at all beyond imagination, but you need to dare to accept a large target. Unless you accept the larger goals, we are not going to reach anywhere close to that,". It is now time to take a leaf out of that page and start planning for a bolder and more dynamic approach to growth if we are to reach our goals.

Warm regards,
Ravish Kamath

Council Activities September 2019

Meeting to discuss Negotiations under the proposed Economic & Technology Cooperation Agreement (ETCA) with Sri Lanka – September 04, 2019, New Delhi

A meeting was held under the Chairmanship of Mr. B.S. Bhalla, Additional Secretary (South Asia), to obtain further views of stakeholders with regard to the list of products placed under the negative list by Sri Lanka under the India Sri Lanka Free Trade Agreement.

Mr. Sanjiv R. Dewan, Regional Director, represented the Council at the meeting.

Seminar on "Trade and Investment Opportunities for Indian Companies in African Countries" – September 05, 2019 – Chennai

The Council participated in a Seminar on 'Trade and Investment Opportunities for Indian Companies in Africa', organized by the Confederation of Indian Industry (CII).

Mr. Jaswanth Soundarapandian, Regional Director, participated in the seminar.

Export Awareness Seminar – September 07, 2019 – Ludhiana, Punjab

The Council organised an "Export Awareness Seminar" in Ludhiana, on Saturday, 7th September, 2019 in association with Plastic Manufacturers & Traders Association, Punjab, to give a boost to plastic exports from the State. Present at the occasion were Mr. Vikram Bhadauria, Regional Chairman, The Plastics Export Promotion Council, Mr. G.S Batra, President, Plastic Manufacturers & Traders Association, Punjab, and other senior officials from O/o Additional DGFT, Ludhiana and ECGC Ltd.

Meeting on Reducing the usage of single use plastic, encouraging permissible plastic and rehabilitation of plastic manufacturers – September 09, 2019 – New Delhi

A meeting chaired by Mr. Anil Agarwal, Joint Secretary (JS), DPIIT was held to deliberate upon the phasing out of single use plastics, and plastic waste management. Mr. Sanjiv R. Dewan, Regional Director represented the Council at the meeting.

Meeting with Industry Associations on Regulatory Instruments for Formulation & Implementation of an Effective Trade Policy and Development Strategy – September 11, 2019 – New Delhi

A meeting chaired by Hon'ble Minister for Commerce & Industry (CIM), Shri Piyush Goyal was held with industry associations on Regulatory Instruments for the formulation and implementation of effective trade policies and strategy for development.

Mr. Arvind Goenka, Vice Chairman, Mr. Vikram Bhadauria, Regional Chairman (North), Mr. Sribash Dasmohapatra, Executive Director & Mr. Sanjiv R. Dewan Regional Director represented Plexconcil at the above meeting.

Round Table – "West Bengal Way forward" – September 11, 2019, Kolkata

A round table was organized by Bharat Chamber of Commerce in Kolkata on 11th Sept. 2019 and the following dignitaries spoke at the meeting.

1. Prof. Saugata Roy, MP and Member committee of Undertakings Lok Sabha
2. Prof. Pradip Bhattacharya, MP, Rajya Sabha
3. Md Salim, Former MP
4. Shri Chandra Kanta Bose, Vice President, BJP, Paschim Banga

Mr Niotpal Biswas, Regional Director represented the Council at this meeting.

Programme on IGST Refunds Outreach Drive and Sensitization of MSMEs for claiming IGST Refund – September 12, 2019 – Chennai

The Council participated in a Special Outreach Programme organized by the Chennai Customs Commissionerate at the Custom House, Chennai, on September 12, 2019. The meeting was part of an initiative of the Customs Department to look in to the issues of MSMEs in Tamil Nadu, which includes Fastrack sanctioning of DBK, IGST refund, ITC refund, exports and Imports issues etc. The meeting was called by Smt. Sudha Koka, Commissioner of Customs, Chennai IV.

Mr. Jaswanth Soundarapandian, Regional Director and Mr R. Dayanidhi, Assistant Director, represented the Council in the above meeting.

CAPINDIA 2019 Promotions at TAPMA AGM – September 22, 2019 – Chennai

The Tamil Nadu Plastic Manufacturers Association (TAPMA) Management Committee invited the Council to be part of their 34th Annual General Meeting on September 22, 2019, held at the Ambassador Pallava Hotel, Chennai.

During the event, Council officials promoted the upcoming CAPINDIA 2019 Exhibition as well as member mobilization amongst the attending TAPMA members prior to

and after their AGM. CAPINDIA 2019 flyers and Council's Membership benefits pamphlets were disseminated amongst all the attending delegates.¥

CII Port Conclave 2019 for "Port-led Industrialization" – September 23, 2019 – Chennai

A Conclave was organized by the Confederation of Indian Industry (CII), Chennai, as Port-led industrialization with robust maritime logistics ecosystem and modern and efficient port infrastructure can enhance export competitiveness due to savings on supply chain time and cost, and therefore become a catalyst for economic growth.

Mr. Jaswanth Soundarapandian, Regional Director, participated at the conclave.

Seminar on export Incentive in the changing scenario, issues & challenges in logistics and key aspects of banking regulatory guidelines on Exports, Interest Equalization Scheme and Export Finance – September 25, 2019 – Kolkata

Dr. Deepankar Sinha, Professor, IIFT, Mr Amit Pal, COA Member, PLEXCONCIL, Mr A K Shukla, Vice President, Yes Bank, Mr Nilotpal Biswas, RD, PLEXCONCIL

A seminar was organized by the Plastics Export Promotion Council, in association with CHEMEXCIL in Kolkata on 2th Sept. 2019. Over 50 participants attended the seminar. Presentation was followed by an interactive session.

Seminar on "The Invoice Finance Advantage: Collateral-Free Trade Finance made Easy" – September 25, 2019 – Chennai

The Council's Southern Region office and CHEMEXCIL, Southern Region, jointly organized a seminar on "The Invoice Finance Advantage: Collateral-Free Trade Finance made Easy", by Drip Capital, at Hotel Raj Park, Chennai, on September 25, 2019.

The Seminar was attended by officials from CHEMEXCIL, Mr. Deepak Gupta, Dy. Director, Western Region and Mr. Vicky Moolchandani, Regional Officer, Southern Region, and Mr. R. Dayanidhi, Assistant Director, PLEXCONCIL, Southern Region.

Sensitization workshop on Foreign Trade Data – September 26, 2019 – Kolkata

The Office of the DGCI&S, Kolkata, organised a Workshop on 26.09.2019 for sensitising the exporters/importers regarding trade data improvement. Ms. Rupa Dutta, Economic Advisor, DOC, Additional DGFT, Kolkata & other senior officers from DOC/o/o DGFT were present at the workshop. Mr. Niotpal Biswas, Regional Director and Mr Amit Pal, COA Member represented the Council at this important meeting.

Inauguration Programme on ILAF (India Leather and Accessories Fair) – September 27, 2019 – Kolkata

ITPO organised the ILAF in Kolkata and the event was supported by ILPA and CLE. Mr Nilotpal Biswas, Regional Director attended the inauguration programme. Dr Amit Mitra, Honble Finance & Commerce Minister of Govt. West Bengal inaugurated the fair.

Meeting to discuss how to leverage reduction in Corporate Tax announced by M/o Finance for the growth of Chemical & Petrochemical Sector, and to seek suggestions on proposed new Foreign Trade Policy – September 30, 2019 – New Delhi

A meeting chaired by Secretary (C & PC) was held to deliberate over leveraging reduction in Corporate tax for the growth of the chemical and petrochemical sectors. Suggestions were also sought on the proposed Foreign Trade Policies during the meeting.

Mr. Sanjiv R. Dewan, Regional Director represented the Council at the above meeting.

Important Circulars and Notifications

Regarding IGST Refund Fortnight from 03.09.2019 TO 20.09.2019

The Central Board of Indirect Taxes and Customs has organized IGST refund fortnight from 03.09.2019 to 20.09.2019 wherein following issues will be resolve :-

- To dispose of pending refund cases of exporters because of SB005 error (invoice mismatch) with an officer interface.
- Correction of invoice mismatch (SB005 error) for Shipping bills filed up to 15.11.2018 is extended to 31.07.2019 vide CBIC Circular No. 26/2019 – Customs dated 27.08.2019
- Exporters can submit Concordance table in prescribed format at Special counter opened for acceptance purpose at Nhava Sheva, Tal: Uran,Dist: Raigard (Maharashtra)
- For further clarification please contact to Mr T.P Salim Kumar, Asst. Commissioner of Customs & Mr Sanjay Kumar, Additional Commissioner of Customs

Members were requested to take benefit of this opportunity to get their pending refund claims processed.

The council circular is available for reference on
https://plexconcil.org/public/custom/files/circulars/1568271211.pdf

Regarding Extension in SB005 alternate mechanism for S/B's filed till 31.07.2019

CBIC has issued Custom Circular No. 26/2019-Customs Dt. 27.08.2019 regarding "GST Export refunds- extension in SB005 alternate mechanism and revised processing in certain cases including disbursal of Compensation cess".

As an effect of this circular, manual rectification process of IGST Refunds for SB005 has been extended for S/Bills filed up-to 31.07.2019 for all cases covered under circular no 40/2018 – Customs dated 24.10.2018 (http://www.cbic.gov.in/resources/htdocs-cbec/customs/cs-circulars/cs-circulars-2018/Circular-40-2018-Customs.pdf)

Errors of SB005 (S/B's post 15/11/2018 till 31/07/2019) can be manually rectified as per previously issued circulars.

Relevant members whose IGST refunds where stuck due to SB005 error (in case of S/B filed after 15/11/2018) may take it forward with IGST Refund Cell of respective customs locations for rectification/ refund processing.

For further details members may refer to the said circular on http://www.cbic.gov.in/resources//htdocs-cbec/customs/cs-circulars/cs-circulars-2019/Circular-No-26-2019.pdf

The council circular is available for reference on
https://plexconcil.org/public/custom/files/circulars/1568271254.pdf

Regarding Revised Norms for Execution of Bank Guarantee under Advance Authorisation, DFIA and EPCG Schemes.

Central Board of Indirect Taxes and Customs (CBIC) has issued Circular No 31/2019 -Customs dated 13/09/2019 in order to review the norms for execution of Bank Guarantee under Advance Authorisation (AA), Duty Free Import Authorisation(s) (DFIA) and Export Promotion Capital Goods (EPCG) schemes and have also made clarifications regarding the basis for waiver of Bank Guarantee to be executed with Customs in the Goods and Services Tax (GST) regime under such schemes in respect of manufacturers exporters/service providers.

In the view of the GST regime, the norms for execution of Bank Guarantee under AA, DFIA and EPCG schemes have been reviewed and the following clarification has been given by CBIC:-

1. Manufacturer exporters/Service Providers registered with the GST authorities (Centre/State/Union Territory) who have been exporting during the previous two financial years and have minimum export of Rs. 1 crore or more during the preceding financial year shall also be eligible to claim exemption from furnishing Bank Guarantee under category (d) of importers specified in Table given in para 3.1 of the said Circular.
2. Manufacturer exporters/Service Providers registered with the GST authorities (Centre/State/Union Territory) who have paid GST of Rs.1 crore or more during the preceding financial year shall also be eligible to claim exemption from furnishing Bank Guarantee under category (e) of importers specified in Table given in para 3.1

of the said Circular.

3. Further, in order to avoid difficulties in the GST regime regarding furnishing of proof of export performance or payment of duty required to be certified by the jurisdictional Superintendent of Central Excise (para 3.2(b) of the said Circular), it has been decided to discontinue the requirement for procurement of such certificate from Central Excise authorities.

Therefore, in cases where the AA/DFIA/EPCG authorisation holder is a registered member of an Export Promotion Council, he shall produce a certificate of export performance or payment of duty/GST for the purpose of availing Bank Guarantee exemption from the concerned Export Promotion Council on the lines of similar facility available earlier.

The Circular No 31/2019 -Customs dated 13/09/2019 is available for reference on:
http://cbic.gov.in/resources//htdocs-cbec/customs/cs-circulars/cs-circulars-2019/Circular-No-31-2019.pdf

The council circular is available for reference on:
https://plexconcil.org/public/custom/files/circulars/1568803767.pdf

Regarding INDO – IRAN Bilateral Trade (Rupee Payment Mechanism by IDBI Bank)

IDBI Bank, Mumbai has taken initiative for facilitating India – Iran Trade Settlements in INR.

A brief note on the Indo-Iran Trade Settlements in INR is provided by the IDBI Bank Ltd on https://plexconcil.org/public/custom/files/circulars/1568894714.pdf

Clarification regarding DBK allowed in cases of short realisation of export proceeds due to bank charges deducted by foreign banks.

Central Board of Indirect Taxes and Customs (CBIC) has issued Circular No. 33/2019-Customs dated 19/09/2019 providing clarification regarding duty drawback allowed in cases of short realization of export proceeds due to bank charges deducted by foreign banks.

It is clarified by CBIC that duty drawback may be permitted on FOB value without deducting foreign bank charges. It is further clarified that since agency commission up to the limit of 12.5% of the FOB value has been allowed, such deduction on account of foreign bank charges is allowed within this overall limit of 12.5% of the FoB value. From the average rates of agency commission and foreign bank charges in respect of export shipments, it is seen that these deductions fall within the aforesaid overall limit of 12.5% of FoB value allowed by the Board. Agency commission and foreign bank charges, separately or jointly, exceeding this limit should be deducted from the FoB value for granting duty drawback.

For more details please refer council circular available for download on
https://plexconcil.org/public/custom/files/circulars/1568972198.pdf

Regarding Online filing & Issuance of Preferential Certificate of Origin through the Common Digital Platform & Issue of CoO for India - Chile PTA commencing from 25th September 2019

O/o DGFT, New Delhi has Issued Trade Notice No. 34/(2015-2020) dated 19/09/2019 regarding Online filing & Issuance of Preferential Certificate of Origin through the Common Digital Platform and Issue of CoO for India- Chile PTA commencing from 25th September 2019.

Online platform for Certificate of Origin CoO has been launched on the url: http://coo.dgft.gov.in

The objective of the platform is to provide an electronic, paperless, contactless platform for the CoO application process. The earlier requirement of pre-printed CoO stationery is to be done away with. The authenticity of the certificate would be verifiable through the QR code on the certificate. Verification may also be done by keying in the certificate number on the verification link of the portal.

Complete details are available for download on
https://plexconcil.org/public/custom/files/circulars/1569236609.pdf

Important Circulars and Notifications

Regarding UMANG (Unified Mobile Application for New-age Governance) mobile application

As you may be aware, the Hon'ble Prime Minister of India dedicated to the Nation on the 23rd November, 2017, UMANG (Unified Mobile Application for New-age Governance), an initiative to build a common, unified platform and common mobile app to facilitate single point access to major Government services through mobile. UMANG mobile application already has about 100 departments of the Centre and 20 States providing over 500 services. As per UMANG's vision, 1200 plus high impact services from the Central/State Government departments and agencies are to be provided through UMANG platform. Given the above, all members of Plexconcil may please make use of the UMANG mobile application for their requirements. The details are given in the attached communication from the Ministry.

Complete details is available for download on
https://plexconcil.org/public/custom/files/circulars/1569845269.pdf

International News

Coca-Cola has unveiled its first ever "sample bottle" made using recovered and recycled marine plastics.

It says the bottle demonstrates that "one day", even ocean debris could be used in recycled packaging for food or drinks. About 300 sample bottles were made using 25% recycled marine plastic retrieved from the Mediterranean Sea and beaches through a partnership between Ioniqa Technologies, Indorama Ventures, Mares Circulares (Circular Seas) and The Coca-Cola Company. The bottles were designed and developed to show the "transformational potential" of revolutionary enhanced recycling technologies, which can recycle previously used PET plastics of any quality back to high-quality plastic that can be used for food or drink packaging, including material that would previously have been sent to incineration or landfill. The sample bottle is the first ever plastic bottle made using marine plastic that has been successfully recycled for use in food and drink packaging. This bottle is testament to what can be achieved, through partnership and investment in revolutionary new technologies.

It is being announced as Coca-Cola in Western Europe sets out new goals, in partnership with Coca-Cola European Partners, to support its ambition for a world without packaging waste. The marine plastic bottle has been developed as "proof of concept" for what the technology may achieve in time.

In the immediate term, enhanced recycling will be introduced at commercial scale using waste streams from existing recyclers, including previously unrecyclable plastics and lower-quality recyclables. From 2020, Coca-Cola plans to roll out this enhanced recycled content in some of its bottles.

A newly formed Packaging Innovation Hub will continue to focus and accelerate investment and innovation in sustainable packaging solutions across Western Europe. These include continuing investment in enhanced recycling technologies, as well as alternative packaging solutions for the future, such as paper bottles, bio-based packaging materials, refillable-returnable and packaging-free alternatives, like its dispensed Freestyle or wider micro-dosing solutions.

Bruno van Gompel, technical and supply chain director, Coca-Cola in Western Europe, said: "This bottle is testament to what can be achieved, through partnership and investment in revolutionary new technologies. In bringing together partners from across our supply chain, from a community clean up partnership in Spain and Portugal to an investment in technological innovation in the Netherlands, we have been able, for the first time, to bring damaged marine plastic back to food-grade material to make new bottles.

"Enhanced recycling technologies are enormously exciting, not just for us but for industry and society at large. They accelerate the prospect of a closed loop economy for plastic, which is why we are investing behind them. As these begin to scale, we will see all kinds of used

plastics returned, as good as new, not just once but again and again, diverting waste streams from incineration and landfill."

In 2017, as part of their joint Sustainability Action Plan, Coca-Cola European Partners and Coca-Cola in Western Europe pledged that, by 2025, Coca-Cola will: collect a can or bottle for everyone that it sells; ensure that all of its packaging is 100% recyclable; ensure that at least 50% of the content of its plastic bottles will come from recycled content.

In 2019, in Western Europe, the Coca-Cola System invested 180m euros in sustainable packaging, both across its operations and in the incubation of new packaging and packaging-free solutions for the future. They have now announced further goals designed to accelerate their delivery of a sustainable packaging roadmap for Western Europe, ensuring that all their packaging is collected, recycled and reused.

Source: circularonline.co.uk

MIT alumna converts plastic waste into fuel

It's been nearly 10 years since Priyanka Bakaya MBA '11 founded Renewlogy to develop a system that converts plastic waste into fuel. Today, that system is being used to profitably turn even nonrecyclable plastic into high-value fuels like diesel, as well as the precursors to new plastics.

Bakaya began working on a plastic-conversion system with Renewlogy co-founder and Chief Technology Officer Benjamin Coates after coming to MIT's Sloan School of Management in 2009. While pursuing his PhD at the University of Utah, Coates had been developing continuously operating systems to create fuels from things like wood waste and algae conversion.

One of Renewlogy's key innovations is using a continuous system on plastics, which saves energy by eliminating the need to reheat the system to the high temperatures necessary for conversion. Today, plastics entering Renewlogy's system are first shredded, then put through a chemical reformer, where a catalyst degrades their long carbon chains. Roughly 15 to 20 percent of those chains are converted into hydrocarbon gas that Renewlogy recycles to heat the system. Five percent turns into char, and the remaining 75 percent is converted into high-value fuels. Bakaya says the system can create about 60 barrels of fuel for every 10 tons of plastic it processes, and it has a 75 percent lower carbon footprint when compared to traditional methods for extracting and distilling diesel fuel.

In 2014, the company began running a large-scale plant in Salt Lake City, where it continues to iterate its processes and hold demonstrations. Since then, Renewlogy has set up another commercial-scale facility in Nova Scotia, Canada, where the waste management company Sustane uses it to process about 10 tons of plastic a day, representing 5 percent of the total amount of solid waste the company collects. Renewlogy is also building a similar-sized facility in Phoenix, Arizona, that will be breaking ground next year. That project focuses on processing specific types of plastics (identified by international resin codes 3 through 7) that are less easily recycled.

Source:http://news.mit.edu/2019/renewlogy-plastic-waste-1010

Sabic debuts renewable polycarbonate

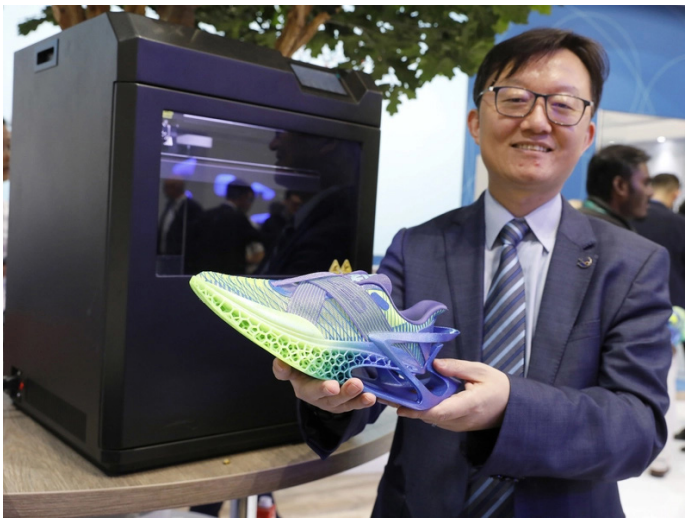
Saudi Basic Industries at K 2019 unveiled what officials said is the industry's first polycarbonate resin based on certified renewable feedstock.

"We're moving our renewable polyolefin technology into polycarbonate," Petrochemicals Executive Vice President Abdulrahman Al-Fageeh said at an Oct. 16 news conference. "This will allow us to reduce CO2 emissions." He added that the new material is being made with renewable content in the phenol, acetone and cumene raw materials that are needed to make PC.

The new PC and other sustainable materials made by Sabic aren't limited to one end market, according to Al-Fageeh. "It's about choosing a material to match the assets in our product portfolio and throughout the entire value chain," he said. Sabic officials said renewable PC can offer carbon footprint reductions of up to 50 percent and fossil fuel deletion of up to 35 percent. The new material will be made at first at the firm's production plant in Bergen op Zoom, Netherlands.

Sabic employs 33,000 worldwide and posted sales of $45 billion in 2018. The firm is 70 percent owned by the Saudi government.

Wanhua, Peak see potential for speed in 3D printed, TPU shoes



Wanhua Chemical Group Co. Ltd. wanted to get a running start on innovation at K 2019, using the show to introduce a 3D printed shoe with Chinese athletic footwear maker Peak Sports.

Wanhua, which is based in Yantai, China, is supplying three different grades of thermoplastic polyurethane as a solution for the footwear industry. The two companies said at a joint Oct. 17 news conference that they plan to expand on their collaboration. The prototype shoe, dubbed "The Next," is entirely 3D printed with TPUs, allowing it to be both customizable and 100 percent recyclable. They touted that as an advancement in an industry where current manufacturing processes make it very difficult to recycle shoes.

Source: Plastic News

ExxonMobil has sustainable options for PE, PP, Vistamaxx

Sustainability is taking many forms for ExxonMobil Chemical. "We're helping customers develop sustainable solutions," Polyethylene Market Development Manager Adeline Duponchel said Oct. 18 at K 2019. "Now we're targeting designs for recycling in products like monomaterial pouches." Duponchel added that, as a resin supplier, Houston-based ExxonMobil can provide several sustainable solutions to its customers, including ways to incorporate recycled content. "Plastic has value; we want to make sure it doesn't lose that value," she added.

According to PE Global Strategic Marketing Manager Francois Chambon, there's "a big drive to simplified solutions" in that market. He also cited monomaterial pouches as an example, since using only PE in those products can eliminate features like polyester substrates that make some pouches harder to recycle.

Monomaterial pouches can use recycled content with the same or similar performance as those made from virgin PE, Chambon added, while competing with materials like biaxially oriented polypropylene film.

Trends like shared cars are providing ExxonMobil with opportunities to develop lightweight materials, according to Anne Villard, PP automotive program manager. New grades of PP can be colored and incorporate different effects, giving automakers flexibility in redecorating vehicle interiors, she said.

ExxonMobil's Atando Cabos project in Chile has used Rethink Recycle grades of Vistamaxx specialty resins to make PE and PP compatible and to turn discarded fishing ropes from the Chilean coast into high-quality end products. The project "is a way to upgrade recycled material," according to Vistamaxx Market Development Manager Gertrud Masure.

Beth Galvin added that Rethink Recycle is fully commercial and has been successful in several durable goods. "It's all about how to maintain and value materials," said Galvin, global marketing manager for specialty polymer products. "We can partner with customers on that."

Source: Plastics News

Next-generation EVs will opt for more PP

The weight-saving attributes of polypropylene, coupled with better noise properties, have placed it in pole position for expanded use in electric vehicles. Germany's Volkswagen (VW) is one such OEM sanguine about the prospects of the resin moving forward.

VW's ID3 electric vehicle (EV), for example, switched from PC/ABS and ABS to PP on account of its lower density and less propensity to squeak compared with styrenic-based plastics. There is also an emerging preference for lower gloss finishes in vehicles that are achievable with PP. Increasingly. Larger parts such as door panels and center consoles, as well as door pillars, will employ PP in EVs according to Gerd Karn, Business Development Manager at plastics distributor and compounder K.D. Feddersen. Karn was speaking to PlasticsToday at the K Show in Düsseldorf.

Feddersen has been active in various auto-related projects of late that selected PP. VW ride-sharing provider MOIA launched the electrically-driven VW Pluto in Hamburg in early 2019. The battery box for the electrical system is manufactured by H & H Gesellschaft für Engineering und Prototypenbau mbH using Hostacom G3 R05 105555 from LyondellBasell, a PP with 30% glass fiber reinforcement that complies with the VW standard 44045 PP10. "With Hostacom G3 R05 105555 from LyondellBasell, we recommended a PP compound which is easy-flowing, has excellent mechanical properties and also presents very low warpage," explains Gerling. According to the distributor, the material is also recyclable and offers a very good price-performance ratio.

Source: Plastics Today

Europe's plastics industry has hit a speed bump. So, why are some people smiling?

The plastics industry, in general, and makers of plastics processing equipment, in particular, have a dour assessment of 2019 and are scratching their heads about business prospects in 2020—overall unpredictability and a downturn in the automotive sector are foremost on their minds. And yet, despite sales declines in the current year, most of them are not wringing their hands. Wittmann Battenfeld General Manager Michael Wittmann set the tone at a press conference on the opening day of K2019: "The slowdown has finally come, and if anyone tells you any different, I would be sceptical", he said, and he wasn't wrong. No one that I spoke with was peddling an alternate narrative. "From 2010 on, there was only one direction for industry, and that was up," said Wittmann. We knew there would eventually be a downturn, he added, it just took a longer time coming than has been the historical norm.

For Wittmann Battenfeld, 2019 sales will be down approximately 12% versus the previous year, Wittmann announced. The downturn has been particularly pronounced in Germany and in the automotive sector, said Wittmann. "A lot of Tier 1 suppliers have stopped all investments," he noted. However, some markets are still seeing an increase, and the United States is showing a slight uptick, so this is nothing like what we experienced in 2008 and 2009, added Wittmann.

Engel also projects a sales deficit in 2019, down 19% year on year, said Christoph Steger. "Usually, we have a six to seven year economic cycle, and this has been a 10-year cycle," he reminded attendees. Like Wittmann, he blamed the slowdown on the automotive sector and overall economic headwinds. Tariffs and sanctions implemented by the Trump administration and China, the unpredictable outcome of Brexit and even consumer uncertainty about the type of automobile they should buy—electric, hybrid or the good ol' internal combustion engine—are feeding this slowdown, he said.

Plastics production also has declined in Europe. While global production of plastics continued to grow in 2018, said industry association PlasticsEurope during a presentation at the K, plastics production in Europe decreased in 2018, and "2019 forecasts show that the downward trend will continue," said the association. "Plastics manufacturers are suffering from weak eco-

nomic development not only in Europe but also worldwide. Economic development has lost considerable momentum, and important customer industries are showing weak to clearly negative growth rates," said PlasticsEurope.

And yet, the tone at the K was anything but downbeat. What gives?

There is, of course, the exuberant optimism that flows from an industry trade show of this scope and size. But I think the very unpredictability of the current global economic situation plays a role, because that can cut both ways. Circumstances, also, can take a turn for the better. The automotive industry is at a crossroads, and that is not likely to change for some time. But the economy as a whole could swing back into positive territory, if the scattershot trade policies of the United States were to take a more deliberative tone, for example.

Perhaps the United States and China strike a deal that settles some, if not all, of their differences. Or, if a Trump administration sunsets, the stock market and the global economy could experience a resurgence. One respected Wall Street analyst has predicted that a return to normalcy, under, say, a President Pence, would juice stock prices.

"The erratic US-China trade war is slowing global growth, disrupting global supply chains, raising costs for businesses and consumers,and crushing the manufacturing industry," reported CNN recently. The Raymond James investment firm wrote in a report published last week that, in the event of Trump resigning, an admittedly low-probability event, the market will rally "as Pence is a traditional, conservative choice."

And what could be more unpredictable than that?

Source: Plastics Today

Polyamide handles heat in turbocharged engines

According to studies conducted by German materials supplier Lanxess, around 80 percent of newly registered vehicles in 2035 will still have an internal combustion engine – in the form of either a mild-hybrid engine, plug-in hybrid engine or pure combustion engine. The trend will shift toward turbocharged engines because they are more efficient and more eco-friendly.

The charge air duct in these engines must be capable of withstanding increasingly higher temperatures due to the smaller installation spaces, rising engine power and new engine designs. This is why Lanxess has developed Durethan AKV320ZXTS2 (currently available as Durethan TP202-048), a blow-moldable polyamide (PA) 66 that, due to its thermal durability of up to 230° C, is capable of meeting high temperature requirements. The abbreviation XTS stands for "Extreme Temperature Stabilization".

The new compound is a further development of the recently launched Durethan AKV320ZH2.0 and also has a wide processing window for suction blow molding. It is also resistant to pressure changes at high temperatures and produces smooth pipe surfaces with an extremely high-quality surface finish. "Our material does not exhibit any stabilization gaps between 160° C and 230° C and still delivers outstanding mechanical performance even at 230° C," says Dr. Klaus Küsters, who is responsible for the business development of blow molding at Lanxess.

Source: Plastics Today

DSM promises bio-based alternatives for entire engineering plastics portfolio

DSM Engineering Plastics plans to offer bio- and/or recycled-based alternatives for its entire range of engineering plastics by 2030. To address the growing consumer and legislative demand for sustainable living practices and more circular products, manufacturers are increasingly integrating bio- and recycled-based materials into their designs. By offering a full portfolio of alternatives that contain at least 25% recycled and/or bio-based content by weight in the final product by 2030, DSM Engineering Plastics will enable its customers to meet these demands and make more sustainable choices.

While several leading consumer product, auto, and electrical/electronics OEMs have announced concrete targets for incorporating recycled for bio-based content into their products, many others have internal targets according to Joost d'Hooghe, Vice President Polyamides at DSM Engineering Plastics. "Awareness and a sense of urgency in the market have become apparent. Further, the readiness of our suppliers such as additive manufacturers is also a lot different than it was three months ago."

The portfolio of sustainable alternatives will leverage a toolbox of different technologies and approaches such as fermentation, mechanical recycling and mass balance accounting* of bio-based and/or chemically recycled feedstock.

As an immediate step, DSM Engineering Plastics is launching bio-based grades of its Arnitel thermoplastic copolyester (TPC) and Stanyl polyamide (PA) product portfolio manufactured via a mass-balancing approach of bio-based feedstock. The Stanyl bio-based PA grades are already available with the globally recognized sustainability certification ISCC Plus and bio-based content of up to 42%. The bio-based content is derived from tall oil, which is a byproduct of pulp and paper manufacture. The Arnitel grades will have bio content of up to 25%.

Adds d'Hooghe: "Our Arnitel and Stanyl bio-based alternatives will deliver the same functional performance as our conventional portfolio. This will enable our customers to easily shift to a more sustainable solution without having to requalify materials."

*Mass balance accounting is a well-known approach that has been designed to trace the flow of materials through a complex value chain. The mass balance approach provides a set of rules for how to allocate the bio-based and/or recycled content to different products to be able to claim and market the content as 'bio'-based or 'recycled'-based.

Source: Plastics Today

A leap forward in additive manufacturing

3D printing technology company EOS (Krailling, Germany) is touting its new LaserProFusion technology at K 2019 as an additive manufacturing revolution, not simply an evolution. It has the potential to replace injection molding in many applications, explained Moritz Kügler, Product Manager Polymers, at stand C 25 in hall 4.

"We are presenting a technology at this time, not a system, because we want to talk to our customers first and show them what we can deliver. LaserProFusion provides tremendous benefits in terms of speed, reproducibility and freedom of parameterization," said Kügler. That's where the conversation begins, and then "we can discuss the applications and parts that make the most sense," he told PlasticsToday.

At the heart of the technology is an array of almost one million diode lasers in the powder bed process. For each layer, only those lasers matching the CAD data of the part are activated, and they can be controlled down to the pixel, explained EOS in a press release. This method not only makes it possible to perform highly detailed work, the component characteristics can also be influenced locally. The new technology significantly shortens exposure times, regardless of the number of components and their geometry, said EOS.

The leap in productivity represented by LaserProFusion is illustrated with a display on the stand, pictured here. The P3 system produced more than 10 million mascara brushes last year, and that technology was dwarfed by the recently introduced P5. As shown in the image, LaserProFusion takes that to a whole new level. The column is filled with petrol filler caps, and it takes about nine seconds to print one cap using this technology (this is an average, of course, since LaserProFusion is a batch process, stressed Kügler).

In addition to being a tool-free technology, LaserPro-Fusion allows part consolidation, eliminating assembly steps, and delivers unfettered design freedom. The automotive sector in the United States and Germany has taken a keen interest in the technology, as has the electronics industry and, somewhat surprisingly, the consumer goods sector, said Kügler. Select customers have been invited to check out the system at EOS headquarters near Munich.

Source: Plastics Today

Medical molding cell produces one sharp-looking pipette tip at K 2019

Sumitomo (SHI) Demag (Schwaig, Germany) showcased its new IntElect S electric press anchoring a turnkey medical molding cell at K2019. Designed to produce narrow-tolerance products in high volumes, the 180-tonne machine is molding pipette tips in a 64-cavity mold from Plastisud that contains a new two-injection point concept, explained Sumitomo Product Manager Anatol Sattel in a prepared statement.

The new mold concept in combination with Sumitomo (SHI) Demag's machine technology deliver greater precision and repeatability, according to Sattel. "The ability to install small screws matched with a large mold space is a big advantage, as it improves dosing and injection performance, which is so critical when molding micro components like pipette tips," he said. Moreover, direct-drive technology in the IntElect machines enables accelerated injection speeds to precisely fill 64 cavities, added Sumitomo.

The press also has been designed to satisfy the ISO 13485 quality systems standard for medical manufacturing. Sumitomo added machine parameters to prevent operators from making adjustments that are outside of specified ranges unless they have been authorized to do so. "Key areas that might impact a stable process include changes in pressure, temperature, flow rate and cooling rates, any of which may trigger a costly re-validation exercise," explained Product Manager Peter Gladigau.

Materials supplier Borealis has provided its Bormed BJ-868MO polypropylene co-polymer to mold the pipette tips on the K show floor. The material has a melt flow rate of 70g/10 min, facilitating filling of the 64-cavity mold, said Sumitomo (SHI) Demag. The co-polymer is engineered to support customer compliance with the European Union's Medical Device Regulation and IVD Regulation. The production cell also is equipped with a Hekuma side-entry robot that provides batch-level tracking and contact-free visual inspection.

The HEKUtip gripper system removes the 64 pipettes from the mold in less than 0.6 seconds and places them in corresponding racks. If an issue arises with a specific cavity, the rack containing all corresponding parts is isolated and recalled.

After each rack is filled, a camera visually inspects the components from multiple angles to ensure there are no holes or burrs. For optimal quality assurance, the tip is inspected from the bottom of the pipette, as well as from a side angle. The tip collar is inspected from above. HEKUtip's modular design can accommodate up to 128 cavities; 100% camera inspection or random quality checks are available as options. Product rack labelling also is available, as well as further automated packaging configurations, including stacking, lidding, banding and shrink wrapping. Systems also can be configured to include filter separation, feeding and filter assembly, and batch tracking.

Source: Plastics Today

India News

India's biggest packager sees profits in plan to cut plastic

Uflex aims to invest $500 mn to expand existing facilities and build new ones focused on greener materials.

India's largest manufacturer of toothpaste tubes, snack packets and other flexible packaging sees profits in Prime Minister Narendra Modi's plan to eliminate single-use plastic by 2022. Uflex Ltd. aims to invest about $500 million over four years to build new factories and expand existing facilities focused on greener materials, Anantshree Chaturvedi, chief executive officer at unit FlexFilms International, said in an interview in Mumbai. Only recycled plastic will be offered with no new creation of the material, he said.

Uflex is considered among the bellwethers for consumption in India, which has the world's largest millennial population, a demographic that drives purchasing trends worldwide. While the company is also seeing the effects of India's economic slowdown, it's betting that increasing awareness about sustainability will offer opportunities for growth.

Rising demand from the U.S. and Europe for clean packaging options will continue to boost revenue, Kentucky-based Chaturvedi said. "However, the next phase of growth will come from a combination of developing and newly developed markets such as Eastern European countries, the Asian belt, Brazil and Peru."

Uflex is building new factories in Nigeria, Hungary and Russia. It claims to be the only company globally that provides plastic packaging film with 90% recycled material, compared with 60% for its competitors, and plans to move to 100% soon. The company manufactures abroad but packaging activity is carried out only in India and its clients include PepsiCo Inc., Tata Global Beverages Ltd. and The Coca-Cola Co.

Industry seeks clarity on single-use plastic ban; officials say each state following its own policies is fragmenting industry

Industry has sought clarity on the government's plan to phase out single-use plastic by 2022 and urged the Centre to issue clear guidelines. An outright ban would escalate costs and lead to job losses and disrupt supply chains, companies said.

The uncertainty "has led to the closure of about 10,000 units and the plastic industry is staring at job losses of 4.5 lakh people ahead of the Diwali season," said Jayesh Rambhia, co-chairman, environment committee, All India Plastic Manufacturers Association. "The industry urgently requires clear guidelines on what the short and long-term plan for single-use plastic is."

There are an estimated 50,000 plastic manufacturing units in the country. The government did not ban single-use plastic bags, small bottles, cups, plates, straws and certain types of sachets on October 2, as had been widely expected. It also hasn't defined single-use plastic. "The Centre directed states to take action on October 2 but different policies across states are fragmenting the Indian market, which was unified by GST (goods and services tax)," Rambhia said. "Right now, there's uncertainty and fear at ground level and if there's a sweeping ban on single-use plastic without alternatives, the economy could come to a grinding halt."

Single-use plastic, or disposable material that can be used only once before it is either thrown away or recycled, is used by almost all consumer-facing industries including food processing and food delivery, retailers for packaging and selling finished goods, pharmaceuticals and agriculture.

Industry executives said proper waste segregation and management could resolve the problem to a large extent, as in many developed countries. "Single-use plastic is part of every industry. Clear guidelines on what is not acceptable and stepping up infrastructure for recycling are the only solutions," said Bisleri International chairman Ramesh Chauhan.

So far, 18 states have banned plastic bags, and many such as Maharashtra, Tamil Nadu and Madhya Pradesh have also banned single-use plastic products including cutlery, plates, cups and straws. "It will take at least a couple of years to make the transition to alternatives other than single use plastic for packaging," said Anshul Gupta, cofounder of cloud kitchen startup Box8, which delivers over one million meals a month. "There is no short-term solution and the challenge is to work out alternatives which are cost-effective."

Lobby groups say lack of clarity and uncertainty are preventing industry from looking for specific solutions. Vijay Habbu, technical advisor to PET industry associations such as the Packaging Association for Clean Environment (PACE), said trade intermediaries are in a state of flux. "For example, small-sized plastic bottles used for water, beverages pharmaceuticals or health drinks need to be exempted as they offer right-portioning and have no viable alternatives. And what about small sachets made from multi-layered packaging which sell everything from shampoo to cookies? The intermediaries supplying these plastics don't know what to do."

Source: Economic Times

Alcis Sports is turning plastic bottles into lightweight T-shirts

When Roshan Baid, 46, and Ravish Nanda, 45, decided to build a sports apparel company two years ago, they made sure to do it the right way and for the right reasons. Their company, Alcis Sports, not only produces clothes that are of fine quality and affordable, but are also made of recycled plastic PET bottles, therefore, doing a huge favor to both society and the environment. The homegrown athleisure offers sportswear in the categories of running, training, yoga, racquet sports, and core. Each of these is different and are custom-made for specific activities.

Finding sweet spot

As more and more Indians are becoming health and fitness conscious, Baid feels the availability of products is on limited choices- either expensive and of top-notch quality or affordable but of poor quality. Quality sportswear is believed to be in massive demand across the

country, not only among the urban youth but also in the tier B, C and D towns. “We wanted to hit that sweet spot between quality and affordability,” he said. The company’s apparels are priced between Rs. 399 to Rs. 3999.
Baid said that they are planning to produce 50% of their garments from recycled polyester within the next few months. Generally, t-shirts are made of Polyester - a man-made fiber, production of which involves huge quantities of water, chemicals, and use of fossil fuels. The raw materials and by-products are toxic and pollute water and air, causing several health hazards.

This is why the co-founders thought of using R-PET (Recycled Polyethylene Terephthalate), which is a strong, durable and recyclable material used for soda bottles, water bottles, food jars etc. For now, their two hot selling products- Wonder Tee and Wonder Polo are made from recycled polyester out of R-PET bottles, where about eight plastic bottles are used to make one T-shirt. The collected PET bottles are sterilized, dried and crushed into small chips, followed by heating and are passed through a spinneret to form strings of yarn. The yarn is wound up in spools and the fiber is then passed through a crimping machine to create a fluffy wooly texture. Thereafter, the final yarn is baled, dyed and knitted into fabric.

Each t-shirt saves approximately 27 litres of water, uses 50% less energy to produce and reduces carbon emission by over 54%. They are softer and lighter than normal ones, weighing just 85-90 grams. Moreover, the manufacturing process for making these recycled t-shirts is almost similar to other tees; hence there is no real cost advantage or disadvantage.

Brisk business

The initial investments in Alcis were made by the promoters. Later, it secured a $4 million investment from Singapore-based venture capital firm RB Investments, which has a strong portfolio of Indian startups, including The Beer Cafe, Swiggy, Bluestone.com, Fab hotels, and Faasos. “We received phenomenal support from our customers and have already doubled our turnover and now are seeking a second round of funds to spur growth across India,” Baid said. In FY16-17, Alcis Sports did a business of Rs. 6 crore, in FY17-18 they touched Rs. 24 crore. They were aiming to reach Rs. 60 crore by the end of FY18-19. “We are growing more than 100% every year,” the 46-year-old entrepreneur said.

Anshul Malpani, master franchisee of the brand, said it’s the premium quality and accommodative prices of the products that has garnered the positive turnover. He also mentioned that in just two months since its launch, the exclusive outlet of Alcis Sports in Vaishali, Jaipur has already been seeing an average of 25-30 customers daily.

Baid used the manufacturing strength and experience of running integrated sports-wear manufacturing company- Paragon Apparels, for Alcis Sports. The company is currently selling over 40,000 items every month through various channels. Alcis Sports is available in over 700 outlets across the country including all leading large format stores such as Lifestyle, Shopper Stop, Central, Globus, Sports Station, etc and online retail websites and 11 exclusive brand stores at New Delhi, Mumbai, Kochi, Jaipur, Guwahati, Bangalore, Goa, Bagru, and Kurukshetra. It is now planning to launch kids wear, footwear, bags and other accessories soon.

Source: Economic Times

Saudi Aramco’s acquisition of 70% stake in Sabic get clearance in India

Competition Commission of India (CCI) has approved acquisition of 70% stake in Sabic by Saudi Aramco from the Public Investment Fund (PIF) of Saudi Arabia. In March this year, Aramco signed the deal to buy 70 percent in Sabic for the equivalent of US$69.1 billion in Saudi riyals at the time.

In India, Saudi Aramco is mainly active in the supply of crude oil, liquefied petroleum gas (LPG), base oil, and petrochemical products, while SABIC is mainly active in the supply of agri-nutrient and petrochemical products.

Source: Plastemart

W.R. Grace & Co. licenses UNIPOL PP Process technology to Bharat Petroleum Corp Ltd.

W.R. Grace & Co. has licensed its UNIPOL Polypropylene (PP) Process technology to Bharat Petroleum Corporation Limited (BPCL).

Located in Rasayani near Mumbai in Maharashtra, India, the proposed world-scale capacity UNIPOL PP facility will produce 450,000 m tpa of propylene. BPCL intends

to manufacture phthalate-free polymer products for the Indian market using the most advanced PP process and catalysts technology available.

Grace's all gas-phase UNIPOL PP Process Technology provides the broadest range of PP homopolymers, random copolymers, and impact copolymers in the industry. This process technology has no moving parts inside of the reactor and requires less equipment than any alternative. It is a reliable, safe, and stable operation that leads to lower capital, operating, and maintenance costs.

Shri R. Ramachandran, BPCL's Director (Refineries) said, "Investing in the UNIPOL PP process technology gives us the ability to make a broad range of phthalate-free products for our customers. As the demand for these advanced PP products increases in the region, BPCL wants to ensure that it is using the most up-to-date, reliable, and cost-effective technology to meet our customers' needs." Laura Schwinn, President of Grace's Specialty Catalysts business, said, "Grace is excited to partner with BPCL. We are confident that the wide range of polymer products, combined with our non-phthalate CONSISTA catalysts, will enable BPCL to give their customers the edge they seek in their markets.

Source: Plastemart

Refining edge, consumer biz success can keep RIL on top

The country's most valuable company Reliance Industries (RIL) created a new valuation benchmark, vaulting past the Rs 9-lakh-crore market-cap barrier for the first time and also another record in superlatives: Of the highest quarterly net profit. Its performance is likely to stay robust if refining margins remain superior to a key regional gauge, and consumer businesses continue to expand at current rates.

Expectedly, the RIL stock has outperformed benchmarks by 9% in the past three months, thanks in no small measure to the proposed sale of its energy assets to Saudi Aramco. A cut in corporate taxes also helped. Quarterly earnings have surpassed Bloomberg's consensus estimates, although upside potential for the stock would depend on the core energy vertical. RIL has beaten Bloomberg consensus estimates 14 times out of the last 18.

Analysts are focused on RIL's gross refining margins (GRM), or what the company earns from turning every barrel of crude oil into motor fuel or other energy forms. GRM improved to $9.4 per barrel in the September quarter, compared with $8.1 in the previous quarter. Its premium over the Singapore GRM, a regional benchmark, was $2.9 per barrel against a sixquarter average of $4.33 per barrel.

Analysts believe a tight global market reduced the cost competitiveness of heavy crude that has higher sulphur content, something RIL's state-of-the-art refinery can process. To be sure, global macro headwinds continue to weigh on RIL's refinery & petrochem businesses. The latter vertical witnessed lower realisation due to falling margins on mono-ethylene glycol, paraxylene, polyethylene and polypropylene. This caused operating profit in the division to contract 6.3%, despite a volume growth of 5.3%.

Source: Economic Times

Adani partners UAE's Adnoc, Germany's BASF for $4 billion chemical venture

Billionaire Gautam Adani-run Adani Group has forged a partnership with UAE's oil firm Adnoc, German chemical giant BASF and Austria's Borealis to study the feasibility of setting up a USD 4 billion chemical complex at Mundra in Gujarat by 2024.

The four firms have signed a memorandum of understanding (MoU) to "engage in a joint feasibility study to further evaluate a collaboration for establishment of a

chemical complex in Mundra, Gujarat," the companies said in a statement.

In January this year, Adani Group had announced plans to set up a Rs 16,000 crore chemical factory at Mundra in partnership with BASF. The present MoU, the statement said, was the next step of the January announcement.

"With the inclusion of Abu Dhabi National Oil Company (Adnoc) and (Europe's second-largest producer of polyethylene and polypropylene) Borealis as potential partners, the parties are examining various structuring options for the chemical complex that will leverage the technical, financial and operational strengths of each company," it said.

The total investment is estimated to be up to USD 4 billion (about Rs 28,400 crore), it added, but did not state which company will hold how much stake. The partners aim to finalise the joint feasibility study by the end of Q1 2020. Production is intended to commence in 2024.

"The collaboration includes evaluating a joint world-scale propane dehydrogenation (PDH) plant to produce propylene-based on propane feedstock to be supplied by ADNOC. Propylene will be partially used as feedstock for a polypropylene (PP) complex, owned by ADNOC and Borealis," it said. The PP complex will be the first overseas production joint investment by ADNOC and Borealis as part of a strategic framework with their current joint venture Borouge.

Furthermore, propylene will be the key raw material for the previously announced acrylics value chain complex comprising glacial acrylic acid (GAA), Oxo-C4 (butanols and 2-ethyl hexanol), butyl acrylate (BA) and potentially other downstream products as part of a joint venture of BASF and Adani in which BASF holds a majority.

"The designated site is planned at Mundra port in Gujarat, India, and the products are predominantly for the Indian market, serving a wide range of local industries, including construction, automotive and coatings," the statement said.

Besides investing in the chemical factory, the partners will also invest in wind and solar power plant at the site to meet electricity requirement of the unit. "The partners are evaluating co-investment in a wind and solar park with the plans at an advanced stage of development," it said. "If realized, this would be the world's first CO2-neutral petrochemical site to be fully powered by renewable energy, fully in line with the partners' commitment to sustainability and energy efficiency."

The products produced would be predominantly for the Indian market to serve a wide range of local industries, including construction, automotive and coatings, whose growing demand is currently supplied via imports. Adnoc has also signed an initial pact to take a stake in a mega refinery-cum-petrochemical complex planned by state-owned oil firms led by IOC in Maharashtra. Alfred Stern, CEO of Borealis, added: "This partnership is a unique opportunity to strengthen our PP presence in India with proprietary Borealis Borstar PP technology and to create value and tangible benefits through innovation for customers across multiple industries." As per the January announcement, BASF was to hold a majority controlling stake in the new chemical venture. It will, however, hold a minority interest in the power venture.

Source: Economic Times

ITC launches first Multi-Layered plastic collection, recycling drive in Pune

The campus of Shakti Plastic Industries in Palghar, near Mumbai, resembles a junkyard with piles of garbage strewn all over. Workers scan through this waste for multilayered plastic (MLP), basically, food and chocolate wrappers and chip, biscuit and snack packs that will be used for recycling purposes.

Fast-moving consumer goods (FMCG) major ITC has introduced the country's first MLP collection and recycling initiative in Pune, tying up with a waste-pickers co-operative (Swach) at one end and recyclers such as Shakti Plastic at the other to ensure sustainable plastic waste management. The plan, according to Chitranjan Dar, head of projects, EHS and quality assurance, ITC, is to scale up the project to more cities, including places such as Bengaluru and Hyderabad.

Why the project is of significance is because MLP is difficult to recycle and has posed a huge challenge to all stakeholders, including companies, consumers and policymakers in the war on plastic. User industries, including packaged food companies, argue there is no replacement to MLP, which simply put consists of multiple layers of plastic and other materials such as aluminium foils, paper, paperboards etc, which are all part of the packaging.

Source: Business Standard

Biocon may replace disposable insulin pens with reusables

With the government considering a blanket ban on all forms of single-use plastic, pharma major Biocon on Thursday indicated it could replace the disposable plastic pens with reusable ones for insulin products. The pharma industry said the government has indicated to it that it could find a solution for replacing the use of single-use plastic for pharma packaging within a year's time or so. According to reports, the blanket ban has been held off, at least for the moment, given the industry is grappling with slowdown blues and it could be disruptive if implemented right away.

Meanwhile, Biocon's Chairperson and Managing Director Kiran Mazumdar-Shaw tweeted on Thursday: "As a responsible company, we would like to lead the way in replacing disposable plastic pens with reusable pens for insulin products. I hope patients cooperate." She said it was up to individuals and individual corporations to initiate a plastic reduction plan.

A company spokesperson clarified that Biocon had already introduced a reusable insulin pen called INSUPen in 2011. Biocon's ready-to-use pre-filled disposable pen with insulin Glargine is manufactured at its plant in Bengaluru.

Disposable pens are generally more convenient than reusable ones because a user does not need to load any cartridge. The downside is that they usually cost more and also contribute to a significant amount of medical waste. Shaw in a blog in April had pointed out that when given the choice, more people are likely to choose the more affordable and environmentally friendlier reusable pens. "Disposable pens should only be given to the very old or the very young, who would find it difficult to load a reusable pen," she had then said.

The reusable insulin pen market in India is largely dominated by French player Sanofi and Danish Novo Nordisk. Sanofi had introduced a reusable insulin pen some years back. Meanwhile, the other pharma majors have not yet announced any significant measures to alter their packaging to cut down on single-use plastic. An industry source indicated that the government has verbally indicated to the industry that it has around one year until it can come up with an alternative to packaging with single-use plastic.

The chairman of a pharma company, which ranks among the top 10 players here, said, "If pharma packaging for liquid oral formulations is done in glass bottles, the costs would increase significantly. There are also issues around waste. We can definitely move towards more environment-friendly ways, but then the government has to allow us to increase the prices and it is not possible to absorb the costs."

He also claimed that the same cannot be implemented for products outside of the National List of Essential Medicines (NLEM) under price control. "For non-NLEM products, the maximum price rise allowed every year is 10 per cent. The pharma industry is already under stringent regulatory pressure," he added.

Sudarshan Jain, secretary general of the Indian Pharmaceutical Alliance, which represents leading pharma companies in India, said the pharma industry was mulling over options to cut down on single-use plastic, but it would take some time. "Companies can cut down on plastic once we have clarity from the government on the pricing front," said Jain. "Since export markets allow medicines to be packed in plastic bottles, the industry also feels implementing two separate packaging lines for glass and plastic bottles is also not viable."

Source: Business Standard

Industry mulls polyester yarn for milk packaging

With the government all set to ban single-use plastics on the occasion of the 150th birth anniversary of Mahatma Gandhi on October 2, plastic manufacturers are looking to produce alternative materials at an affordable price.

Since glass or any other material may work out to be costly, the industry is looking to produce packaging materials made of polymer with high viscosity to make them recyclable. For milk packaging, the industry is mulling to manufacture pouches and bags made from polyester filament yarn (PFY) which could be used 45-50 times and are also recyclable. Consumers would be able to send these pouches back to milk suppliers, resulting in savings in the cost of packaging.

"Switching to alternative packaging materials, such as glass and tetra pack, would add to the cost of packaging, handling, and transportation (as glass is heavier than plastic). Neither is it user-friendly nor cost-effective. Thus, until the industry comes out with an alternative solution of packaging, the ban should be pushed by at least three months. Also, the ban should be implemented in a phased manner," said a senior industry official.

Meanwhile, the industry is awaiting a definition for "single-use" plastic, even as the proposed date of the ban is fast approaching. Currently, the single-use plastic is defined as the one made of polyvinyl chloride (PVC) and polyethylene like carry bags, which are not recyclable and biodegradable.

The government had fixed a thickness criterion of 50 microns when the use of plastic carry bags was banned a couple of years ago. "Bags or pouches made of PFY should be encouraged with an exemption from the goods and services tax (GST)," said the official.

Meanwhile, R S Sodhi, managing director of Gujarat Co-operative Milk Marketing Federation (GCMMF), India's largest milk-producing co-operative that produces Amul brand dairy products, said: "Milk packaging does not fall in the category of 'single-use' plastic as milk pouches are recyclable. Our milk pouches are 100 per cent virgin LDPE (low-density polyethylene) monolayer ones.

By recycling milk pouches, the industry manufactures pipes and tarpaulin. You will never see even a single milk pouch is thrown into the dustbin. In fact, we have made an arrangement to recycle 100 per cent plastic pouches." But the industry has urged the government to give at least for three months for switching to alternative means of packaging, especially essential commodities. Some alternatives are suggested as tetra packs and hotfill polyethylene terephthalate (PET) bottles with removable lids.

In the United States, hotfill milk and juices are packed in 100 per cent PET bottles, which can be recycled to make polyester fibre and other items, including bottles. "We have to adopt packaging materials being used in the US and other developed countries to avoid single-use plastics. For milk packaging in PET bottles, higher viscosity can be fixed for multi-recycling capacity. This is also least expensive material after the ban on single-use plastics," said an industry expert.

Unfortunately, another alternative i.e. tetra pack is not environment-friendly. For manufacturing tetra pack bottles, trees need to be cut. "Thousands of small and medium enterprise (SME) plants currently manufacturing 'single-use' plastics will be shut down and would render thousands of people jobless. While India's plastic exports would not be impacted, domestic industry would certainly be hit temporarily," said Sribash Dasmohapatra, executive director, Plastic Export Promotion Council (Plexconcil).

Source: Business Standard

ALOK announces strategic partnership with Microban, for producing innovative solutions for Indian plastics industry

(From L to R: Mr Amit Puri, Director, ALOK; Mr Vikram Bhadauria, Managing Director, ALOK; Mr Giorgio Rimini, EMEA Managing Director, Microban)

'Microban Powered' masterbatches to revolutionize cleanliness, hygiene and sustainability of plastics used in packaging, healthcare and industrial sectors, by inhibiting microbial growth

Düsseldorf, Germany, Friday, 18 October 2019: ALOK, India's leading masterbatch producer, announced their partnership with Microban, the global leader in antimicrobial and odor control technologies, for developing antimicrobial solutions for the Indian plastics industry, at K Show 2019.

Through this partnership, which is exclusively for Indian markets, ALOK and Microban will develop masterbatch products enhanced with antimicrobial properties, which will find application in day-to-day use plastic products such as water tanks, food packaging materials, and toys. Built-in Microban technology is proven to inhibit the proliferation of microbes on a treated surface by up to 99.99% and actively reduces the risk of premature product degradation for its expected lifetime.

Speaking about the partnership, Mr Giorgio Rimini, EMEA Managing Director of Microban, said, "India is a strategic market for us, and we are delighted to partner with ALOK. With growing awareness about the hygiene, safety and sustainability of plastics in the Indian market, we see an excellent opportunity to introduce antimicrobial solutions that can help make plastics resistant to microbial growth. ALOK's vast distribution network will help us reach even the remote corners of India."

Speaking at the trade show, Managing Director of ALOK, Mr Vikram Bhadauria, said, "There couldn't have been a more exciting time for us to announce our partnership with Microban, than here at K Show 2019. Microban's antimicrobial technologies, coupled with ALOK's deep understanding of the Indian plastics industry, will enable us to cater to the evolving needs of the customers and further our mission of ADDING GOOD to the plastics industry."

"The Indian antimicrobial additives market is expected to witness significant demand from the healthcare, food & beverage, and packaging sectors in the years to come. Partnering with Microban will allow us to deliver high-quality, consistent masterbatches enhanced with antimicrobial technology to Indian markets - in time, on time", said Mr Amit Puri, Director, ALOK.

This newly forged partnership, which is built on a foundation of product innovation, scientifically-proven technologies, and manufacturing excellence, will pave a way for ALOK and Microban to combine strengths and deliver high-performing antimicrobial solutions across India.

About ALOK Masterbatches Pvt. Ltd. (ALOK)

ALOK Masterbatches Pvt. Ltd. (ALOK) headquartered in New Delhi, is India's leading masterbatch producer, co-creating innovative, reliable and high-quality solutions for the plastics industry. They offer one of the largest additive masterbatch portfolio in the country, with more than 5000 MBs - including calcium carbonate, filler and color masterbatches.

With over 380 employees, robust distribution network and world class manufacturing facilities, ALOK caters to both the domestic market as well as 40 export markets across the world. It has six strategically positioned manufacturing facilities spread across India. ALOK also has a JV in Paraguay – Carmenta, which provides solutions for construction, agriculture, packaging and other industrial solutions. For more information, visit www.alokmasterbatches.com

About Microban International (Microban)

Microban International (Microban), is the global leader in antimicrobial additives and odor solutions. Microban has more than 250 partners around the world who produce more than 1,000 products treated with Microban protection. Microban technologies are seamlessly integrated into products during the manufacturing process or applied topically. Learn more at www.microban.com

For further information, please contact us at:
Rahul Das Gupta: Mob: +91 9654627483 or Email: rahul.dasgupta@astrum.in / info@alokindustries.com

11th PLASTINDIA to be bigger than previous editions, to actively focus on responsible innovation to conserve environment

Expecting 2000 + exhibitors from 45+ countries including India to showcase latest innovation and technology in plastic packaging, manufacturing at 2021 Expo in New Delhi

Plastindia Foundation recently held an event in Mumbai to announce the launch of the 11th Edition of PLASTINDIA to be held in the year 2021 in New Delhi. PLASTINDIA is the third largest exhibition of its kind in the world and the largest in India. It is held once every three years and this edition will be organized from February 4 to 8, 2021at ITPO, Pragati Maidan, New Delhi.

The launch event in Mumbai was graced by Shri Kashi Nath Jha – Joint Secretary, Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers , Government of India along with Shri Rajesh Agrawal, IAS, Executive Director, India Trade Promotion Organization , Mr. Jigish Doshi – President, Plastindia Foundation, Mr Ashok Goel Chairman National Advisory Board, Plastindia Foundation and Mr. Ajay Shah – Chairman, National Executive Council Plastindia2021

The PLASTINDIA 2021 International Plastic Exhibition & Conference will be supported by Department of Chemicals & Petrochemicals - Ministry of Chemicals & Fertilizers, Government of India. This edition of the expo will be held at the new world class venue at ITPO, Pragati Maidan, New Delhi and will showcase India as a global hub for sourcing processed items related to plastics, raw material, machinery and various other products for use in different segments.

PLASTINDIA 2021 is known to provide a superlative platform to showcase world-class innovations and products from the plastic industry that are likely to benefit a host of sectors. Over the years, the Expo has successfully facilitated support from the government where the latter has constituted several groups to address important issues like quality and specifications, recycling and waste management etc of plastic. While PLASTINDIA and Plastindia Foundation are proactively engaged in enabling the sustainable growth of the Indian Plastic Industry, there has also been an ample amount of focus on quality, human health, and most importantly environment.

Speaking on the occasion, Shri Jha said, “The plastics industry in India is contributing significantly in the economic development and growth of various key sectors in the country. Right from automotive, agriculture, horticulture, construction, medical equipment, health care, irrigation, sanitation, drinking water, sports, plastic composites and packaging – all sectors are impacted by the use of plastic. In fact, the food security industry requires the highest ever safe, secure & hygienic packaging and its perfect solution is provided by Flexible Packaging including Plastic woven sacks. The plastics industry continues to break into newer spheres, thereby enabling India to manufacture world class products. I am optimistic that the PLATINDIA 2021 will be a reflection of this and I wish the team great success.”

PlastIndia is also taking active steps to support the decision of the Central Government for single use plastics. It is working towards fully backing the circular economy with focus on Recycle and Multiple use of Plastic Products in line with the vision of the Hon’ble Prime Minister of India Shri Narendra Modi ji.

Plastindia Foundation will meet all stakeholders and submit concrete proposals to the Department with special focus on Plastics and Environment in the near future. Mr. Jigish Doshi said, “We are devoted to promoting excellence in the field of plastics and making India a preferred sourcing base in plastic products for the world. But we will also be focusing very specifically on environmental concerns. We completely support the vision of our Hon’ble Prime Minister of India Shri Narendra Modi ji and will be focusing on the idea of Recycle and Multiple use of Plastic Products. This edition of PLASTINDIA - 2021 is all set to surpass the landmarks created by its previous editions. It will see the presence of more than 2,000+ exhibitors from India, participants from 45+ countries and over 2 lakh business visitors--both national and global. With every edition we are growing and building more number of exhibitors, visitors and participants.”

Mr. Ajay Shah said, “Our mission is to enhance the image and growth of the Indian plastics industry by holding world-class exhibitions in India, at regular intervals. Plastindia Foundation has been taking this initiative over the years to bring together the best in this field globally, which has provided a platform for our domestic industrialists to share their experiences with their global counterparts.”

Mr. Doshi further added, The focus should be on developing new technologies and innovations in order to facilitate growth of the plastic industry. India's plastics industry offers immense potential in terms of capacity, infrastructure and skilled manpower. In this age of globalisation and constant need to improve the standard of living, the demand for plastic is bound to increase exponentially and turn India into the world's next plastic destination. But having said this we must use plastic responsibly to minimise its impact on environment. There is a need to create awareness about recycle, re-use of plastic and adopt a better waste management facility for sustainable growth of the industry.

Some of the dignitaries present at the Launch Function of PLASTINDIA – 2021 include Mr. Erhard Wienkamp, Executive Director, Foreign Trade Fairs Division,Messe Duesseldorf GmbH, and Shri Dr S K Nayak, DG, CIPET The previous edition of PLASTINDIA 2018, which was held in Gujarat, had been inaugurated by the Hon'ble Chief Minister of Gujarat Shri Vijay Rupani. The expo had proved to be an extremely successful global event, attractinga large number of participants and visitors from across the world.

About PLASTINDIA FOUNDATION:

Established in 1987, Plastindia Foundation is the apex body of major associations, organizations, and institutions connected with plastics, with common objectives to promote the development of the plastics industry and to assist the growth of plastics and related materials. The Foundation is dedicated towards national progress through plastics.

The key focus of the Foundation is to facilitate export led growth of the Indian plastic industry and help boost export business volumes and revenues. In line with that, the Foundation also focuses on helping India to become the preferred sourcing base of plastic products around the world.

As part of this exercise, the Foundation creates opportunities to showcase Indian capabilities in processing and converting, at various industry trade shows across the world.

Special Focus CAPINDIA 2019

The 5th CAPINDIA 2019, being under the aegis of the Department of Commerce, Government of India, supported by Department of Chemicals and Petrochemicals, Government of India and organised jointly by PLEXCONCIL, CHEMEXCIL, CAPEXIL & SHEFEXIL is slated to be one of the largest sourcing and networking events for the Chemicals, Plastics, Construction & Mining Industries and Allied Products

As one of the premier events for the Plastics and Plastics Machinery industries, the 5th Edition to be held from December 2-4, 2019 at NESCO in Mumbai, aims to bring together leading exporters and buyers under one roof, demonstrating the Indian manufacturers' and exporters' capacities and capabilities at a global platform, in India.

Product Categories within the Plastics Industry represented @ CAPINDIA 2019

CAPINDIA 2019 will present an extensive showcase of products that includes but is not limited to the below mentioned product categories in Plastics:

Plastics

Raw Materials such as PVC, Polypropylene, Polyethylene, Polystyrene, ABS, Polyester Chips, Urea / Phenol Formaldehyde, Masterbatches, Additives etc. Leather Cloth / Artificial Leather Floor Coverings, Foam Boards Drip Irrigation Systems / Components Pipes & Pipe Fittings, Water Storage Tanks, Toys & Games and Engineering Plastics, Electrical Accessories FRP / GRP Products, Sanitary Fittings, Tarpaulins, Laminates, Fishnets / Fishing Lines Cordage / Ropes / Twins Eyewear, Laboratory Ware, Surgical / Medical Disposable Syringes / Blood / Urine Bags, I.V Sets, Dental Products, Cine X-Ray Films, Human Hair and Products thereof.

Plastics Processing Machinery

Covering injection and blow moulding machines, extruders etc. and moulds and dies thereof.

Consumer & Packaging

Houseware, Writing instruments (ball point pens, fountain pens, gift sets, etc.), range of Flexible and Rigid Packaging Products in Plastics, PP/HDPE Woven Sacks / Bags / Fabrics, Poly lined Jute Goods, Box Strapping, BOPP Tapes, a range of Plastic Sheeting / Films , Pouches, Crates, Bottles, Containers, Barrels, Cans, Carboys, Shopping / Carrier / Garbage bags etc.

Reverse Buyer Seller Meet (RBSM) at CAPINDIA 2019

The Reverse Buyer Seller Meet at the 5th Edition of CAPINDIA brings exporters opportunities to network and build strategic alliances for sourcing and supply; investment; technology transfers and collaboration, etc. RBSMs will be held during the event to promote networking and trade collaboration between select foreign buyers and Indian manufacturers and exporters on a dedicated platform. 400 select international buyers are being especially invited as part of the Ministry of Commerce's MAI scheme to provide further impetus to the exports of the participating key segments.

Seminars @ CAPINDIA 2019

Special Knowledge seminars are held along the side lines of the event with eminent speakers, intellectuals and leaders to present and discuss a variety of industry related issues and topics. These range from export related matters to finance to current best practices, technology, new trends and developments within the Plastics segment.

Event Highlights

- **3 days** of exhibition in Mumbai spread over **7000 sqm**
- A total of over **500 Exhibitors** covering manufacturers / exporters with **200 dedicated Exhibitors showcasing a range of Plastics & Plastics Machineries, Consumer & Packaging Items, etc.**
- Over **10,000 business visitors** including Merchant Exporters, Buyers, etc.
- Over **400 Overseas Buyers from over 48 countries with 160 Buyers from the global plastics export destinations**
- **Dedicated BUYER SELLER MEET** – for exhibitors only
- Networking Opportunities to facilitate businesses
- Branding and Partnership Opportunities
- **Industry Related Seminars**

JAPAN

Economic overview

Japan is the third largest economy in the world and is located west of the Pacific Ocean in the Northern Hemisphere. Though scarce in natural resources, Japan is among the world's largest and most technologically advanced manufacturers of motor vehicles, electronics, metals, chemicals, ships etc. The country enjoys a stable political environment. Recently, Shinzo Abe was declared as Japan's longest serving post-war prime minister. Japan's economy is benefiting from highly accommodative financial conditions which is fuelling stronger-than-expected public investment and capital investment. However, the country's export growth is likely to remain sluggish amid slowdown in the global economy and escalating trade war between US and China.

As of October 15, 2019, the S&P's rating for Japan is A+; Moody's rating stands at A1; and Fitch has a reported rating of A.

Japan has trade agreements with Australia; Austria; Belgium; Brunei; Bulgaria; Cambodia; Canada; Chile; Croatia; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; India; Indonesia; Ireland; Italy; Laos; Latvia; Lithuania; Luxembourg; Malaysia; Malta; Mexico; Mongolia; Myanmar; Netherlands; New Zealand; Peru; Philippines; Poland; Portugal; Romania; Singapore; Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Thailand; United Kingdom; and Viet Nam.

India and Japan signed Comprehensive Economic Partnership Agreement (CEPA) in February 2011.

Economic indicators		2016	2017	2018
Nominal GDP	USD Billion	4,926.7	4,860.0	4,971.9
Nominal GDP per capita	USD	38,805	38,344	39,306
Real GDP growth	%	0.6	1.9	0.8
Total population	Million	127.0	126.7	126.5
Average inflation	%	-0.1	0.5	1.0
Total merchandise exports	USD Billion	644.9	698.1	738.2
Total merchandise imports	USD Billion	606.9	671.9	748.4

Source: IMF, TradeMap

Trade overview

India and Japan engaged in bilateral merchandise trade worth USD 17.3 billion in 2018. During the year, India's exports to Japan were valued at USD 4.78 billion in comparison to India's imports worth USD 12.54 billion resulting in a trade deficit of USD 7.76 billion to India.

Within plastics, India's exports to Japan stood at USD 140 million in 2018 in comparison to India's imports worth USD 993 million from Japan during the same year.

India's plastics exports to Japan largely comprise of:

- Plastics raw materials (76.6%)
- Other moulded and extruded items (9.1%)
- Packaging items (3.6%)

Japan's annual plastics imports are valued between USD 30-35 billion. Its plastic imports are largely catered to, by China (35.2%), United States (13.2%), Thailand (7.6%), and Taiwan (6.9%). India meets just 0.5% of all plastics imports of Japan and ranks 19th among 144 countries which supply plastics to the latter.

Trade potential

Our internal research indicates that India's plastics exports to Japan has the potential to grow by USD 7.7 billion. Product categories, within plastics, that have immense export potential to Japan include:

India-Japan Trade Agreement with the Japan India Industry Promotion Association (JIIPA).

At an interactive session on Trade & Business opportunities between India and Japan that was recently organized by FIEO in New Delhi, on 18th October, 2019, discussions were held to discuss the emerging opportunities between India and Japan and to enhance trade and economic ties between the two countries. During the meeting, FIEO signed an MOU with Japan India Industry Promotion Association (JIIPA).

JIIPA (www.npo-jiipa.org) is a Tokyo based NPO approved by Tokyo Metropolitan Government, to promote trade between India and Japan and provide business consultation and strategy for business development for companies in the Indian and Japanese market, marketing opportunities, advertising support, sales promotion by introducing the most appropriate channel of wholesaler/distributor/dealer/retailer chain.

In the past, the New Delhi based JIIPA has worked with CII, FICCI and AEPC. Plexconcil's former Chairman, Manoj Agarwal and Regional Director, Sanjiv Dewan held detailed discussions with the JIIPA Associate Director, Karan Magu and about the role of Plexconcil in promoting plastics exports to Japan from India and requested their assistance in organizing Council delegations to Japan. The Council was informed that JIIPA could assist with organizing B to B meetings, translation services etc. to facilitate the delegations visiting Japan.

Exporters from the FIBC sector of the Council, are particularly interested in taking a delegation to Japan, as there exists a huge potential for export of FIBCs to Japan, which currently remains untapped. The objective of the meeting was also to understand and explore opportunities for the other potential segments in plastics exports.

Mr. Sanjay Chadha, Additional Secretary, DOC, Mr. Kamal Saraf, President, FIEO, Mr. Shigemaro Yasui, Chairman, JIIPA, along with the Council's former Chairman, Mr. Manoj Agarwal were some of the dignitaries present at the interactive session.

Product Category	Japan's import from India	Japan's import from world	India's export to world	Trade potential for India
	USD Million	USD Million	USD Million	USD Million
Plastics raw materials	109.89	7,187.38	4,498.11	2,729.94
Plastic sheets, films, plates etc	2.45	2,030.45	1,344.62	974.53
Other moulded and extruded items	5.28	3,474.59	619.88	609.50
Medical disposables	1.77	4,660.86	534.33	532.56
Packaging items	2.86	2,058.41	743.21	467.24
Woven sacks / FIBCs	0.78	457.04	922.98	412.96
Travel ware	5.92	591.99	369.73	357.53
All types of optical items	1.87	3,557.31	470.52	234.45
Laminates	0.11	205.75	292.67	205.63
Houseware	2.21	718.50	181.06	178.85

Source: TradeMap, Plexconcil Research

Pre-import condition for Advance Authorisation

Sudhakar Kasture
Director, EXIM Institute
(A Division of Helpline Impex Pvt. Ltd.)

Yesterday, on 14th October, 2019, there were news reports in most of the financial newspapers regarding issue of notices by DRI related to GST exemptions where exports precede imports under Advance Authorisation scheme. It is said that, the Directorate of Revenue Intelligence move followed Supreme court stay on a Gujarat high court orders favoring the exporters. Those companies which have first exported goods & thenimported under Advance Authorisation in that perod where pre-import condition was applicable, are likely to receive notices for violation of Pre-import condition & therefore liable to pay applicable IGST plus interest & may be penalty. The report also said that, such notices were issued against One Thousand exporters.

This is a cause of serious concern. Directorate General of Foreign Trade had issued Notification No 53/2015-20 dated 10/01/2019 regarding Amendment in Para 4.14 and 4.16 (ii) of the Foreign Trade Policy 2015-20. As an effect of this notification, Para 4.14 of FTP 2015-20 was amended to remove pre-import condition to avail exemption from Integrated Tax and Compensation Cess and exemption from Integrated Tax and Compensation Cess is also extended to deemed supplies.

Accordingly, the Department of Revenue, Ministry of Finance had also issued corresponding Notification No.01/2019 Dt. 10.01.2019 seeking to remove pre-import condition and include specified deemed export supplies for exemption from integrated tax and Compensation cess for materials imported against Advance Authorizations and Advance Authorizations for Annual Requirement. However, all these amendments were prospective in nature and hence, they were applicable to imports made on or after 11th January 2019. In other words, there was no relief for those cases where imports have taken place as replenishment before 11th

January 2019.

The pre-import condition was originally imposed vide DGFT notification no. 33/2019 and Customs notification no.79/2017 both dated. 13.10.2017, which means the pre-import condition applies from 13.10.2017 to11th January 2019 (approximately 15 months). The money being demanded by DRI, is purely based on authorisation as a whole and not individual item. This creates very serious problem.

An advance authorisation may cover many inputs. The availability of raw material in the world market, small quantities covered by authorisation, tight delivery schedules for exports & volatility of currency does not always allow any manufacturer to source all its inputs under pre-import condition. All the imported inputs are individually accounted under Advance Authorisation scheme based on bill on entries and all exports of finished goods are also accounted individually based on shipping bills. In other words, individual accounting for every item is available with customs.

IGST demanded by DRI, however does not take into account the actual situation based on date of Shipping bill & Bill of entry. For e.g. an exporter who has an authorisation for import of various inputs required for 50,000 kgs of resultant product and he has exported only 200 kg say on 15th November 2018. Subsequently he has cleared imports worth 40,000 kgs on 20th November 2018 & has claimed exemption from IGST. In such scenario the violation of Pre-import condition should be related to corresponding material used for 200 kgs for export. However in practice DRI is asking repayment of IGST along with interest for entire 40,000 Kgs, saying, pre-import condition is violated. In other words Bill of Entries & Shipping bills are not considered for calculation, only Authorisation is considered. This is not proper & should be immediately resolved.

Recently Honorable Finance Minister, has declared that, schemes like Merchandise Exports from India Scheme (MEIS) cannot be continued; as they are not WTO compliant. Exporters are unlikely to get any benefit of MEIS post January 2020. In the last Six months exports have not registered growth, on the contrary exports are less by - 1.74% compared to same period of last year.

If we study the duty forgone on account of Advance Authorisation scheme, the figures are as under:

Quote: -

Table IV: Revenue Impact on account of Export Promotion Schemes (Receipt Budget 2019-20 annexure - VII)

Sl no	Name of the Scheme	Revenue Impact (2017-18) Rs. Cr	Revenue Impact (2018-19) (Provisional) Rs. Cr
1	Advance Authorisation	11,057	15,075

Unquote:-

Recovery of IGST under Advance Authorisation scheme which is considered as “violation of the pre-import condition, based on authorisation as whole” would be a serious blow to many industries, particularly SME sector. As mentioned above if violation is considered not based on date of Bill of entry & Shipping bill then the impact would be extremely serious & may result into further decrease in exports.

What is most important in such a situation is to withdraw the pre-import condition retrospectively as in any case the inputs for export production were always exempted from all duties for more than 20 years, prior to introduction of GST.

Hope Government looks into this aspect immediately & extend legitimate relief to Exporters.

Your views are welcome!!

Sudhakar Kasture is a leading consultant in International Trade, since last 40 years. He is renowned consultant and advisor to many National & Multinational Corporations, Public limited and private limited companies etc. He has been associated with CHEMEXCIL in the capacity of Consultant since last 15 years. He is presently a Director of Helpline Impex Pvt. Ltd. and a Partner in Generation Next Business Consulting. He is a well-known speaker on the topics related to International Trade, such as Foreign Trade Policy, Import/ Export documentation, Free Trade Agreements, WTO Agreements, Trade Facilitation Agreement, Authorized Economic Operator, and Special Economic Zones etc. etc. He has conducted numerous Training Programs, Seminars, and Workshops for Private and Public Limited companies, trade bodies & institutions including several EPCs. He can be reached on
sk@helplineimpex.co.in

India Gearing-up for new Tech-Trends in Packaging

Efficient and tenable packaging has significant importance to the success of global trade of goods and especially in India, the packaging industry has played a considerable part in the country's overall economic growth considering its wide application. The industry in India continues its fast-paced growth, gaining momentum in the e-commerce, processed food, and FMCG industries. Not only is packaging significant in its primary function of holding, protecting and maintaining the quality of products; but moreover, in recent years, packaging has been playing a very significant role in brand building. The design, material used, and in many cases, ability to re-use packaging have a huge part to play in boosting brand recall and consumer preference. With growing consumerism and globalization, the industry is adapting to new rapidly changing technology to fulfill the high demand.

Indian Packaging Industry Overview

The Packaging industry is the fifth largest sector in India's economy and is one of the highest growth sectors in the country. According to the Packaging Industry Association of India (PIAI), the sector is growing at 22% to 25% per annum. A study by trade and commerce trade association ASSOCHAM and global consulting firm EY revealed that the packaging industry in India is anticipated to reach $72.6bn by the 2020 financial year (FY2020), due to India's growing population and income levels.

Over the last 5 years, the industry has seen a 15% annual growth and the development of packaging machinery is on an upward trend. Both primary and secondary packaging have tremendously grown over the past few years. Companies like Bosch, have made some strides by using robotic technology in this sector and is poised to flourish in the coming years. Currently, the Packaging Industry is also exploring environmentally safe solutions and need of the hour is to ensure that product packing is environmentally friendly. The two innovations in packaging are distinctive packaging and packaging machinery technology.

Evolution in the Indian Packaging Industry

In comparison to about 15 years ago, the demand of packaging, especially in the food sector is now enormous. Talking about the innovation and technologies, France has world class technology in cold chain, packaging solutions and food processing sectors. The recent partnership between India and France was an initiative based on knowledge sharing to bring better technology to India. Basically, the potential is without a doubt immense for the food processing sector, as well as for equipment manufacturers in this sector.

Flexi Packaging

Today, the increase in demand and the growing usage of packaging material in the food and beverages sector and the expanding working population has given momentum to food Packaging Industry in India. The Indian plastic packaging market is worth $7 billion of which 63% accounts for the plastic food packaging itself. The multi-layer plastic food packaging is currently estimated at about $1 billion, which is about 22% of India's total plastic food Packaging Industry.

Being the fourth-largest sector in the Indian economy, the FMCG sector represents the largest opportunities for flexible packaging WITH sub-segments like food and beverages, and personal care being the major end users of flexible packaging in India. With the growth of this market, demand for flexible packaging is expected to increase.

India, as the-fifth largest preferred retail destination in the world will directly lead to the expansion of the flexible packaging market in India.

Rigid Packaging

The market share for rigid plastic in the packaging segment is 26% and half of the rigid packaging market accounts for the non-food sector, 29% beverage and remaining is food. Advanced plastic and Poly Ehtylene Terephthalate (PET) packaging improve the brand image of the product and is also an economic solution for companies. PET packaging is well adapted in India, however new advanced technologies like the patented European PET packaging technology by Petainer Innopac Packaging is now being introduced in the country. The Indian rigid plastic packaging market stood at around $7.7 billion in 2018 and is projected to grow at CAGR of 10.8% to reach $14.4 billion by 2024. Anticipated growth in the market can be attributed to robust growth in food and beverages industry which is the major end-user of rigid plastic packaging. Additionally, healthcare industry, which is another major end-user of rigid plastic packaging, also registered robust growth in the last decade owing to increasing spending on healthcare. Rigid plastic packaging is gaining traction in healthcare sector owing to its properties such as moisture resistance, tamper proof caps, light and chemical resistance, among others.

Moreover, expansion of automobile lubricant industry is further expected to positively influence the Indian rigid plastic packaging market during forecast period.

Retort Packaging

Another Technology expected to experience various advancements in near future is Retort Packaging; in which the technological innovation may lead to complete market change in terms of economical and sustainable advantage. A retort pouch is made up of plastic and metal foil laminate pouch, with 3 or 4 wide seals usually created by aseptic processing, allowing for the sterile packaging of a wide variety of drinks, that can range from water to fully cooked, thermo-stabilized meals such as ready-to-eat meal that can be eaten cold, warmed by submersing in hot water, or through the use of a heater, lighter in weight and less expensive to ship. Retortable flexible containers combine the advantages of the metal can with the frozen boil-in-the-bag. The attributes of flexible containers offer benefits for the consumer, retailer, and manufacturer alike.

For the emerging economies like India and China, retort packaging will create a sturdy demand in the packaging market. The market has three segments; by material, i.e., polypropylene, polyester, aluminium foil and other; by type, i.e., tray, pouches and cartons; or by end use, i.e., healthcare, personal use, food, beverage and others.

Aseptic Packaging

One more technology in food & beverage packaging that has been demonstrating good growth is Aseptic technology which is very suitable for India's climate. This technology takes away the need for refrigerated storage of processed food in order to reduce wastage of perishables.

Aseptic packaging is the final step in aseptic food processing, in which food products are continuously sterilized, ensuring that no microorganisms—which cause either food decay and/or food poisoning—are present. The aseptic packaging system achieves the room-temperature shelf stability by filling a sterilised package with a sterilised food product within the confines a hygienic environment. The purpose of aseptic packaging is to produce a food item that can be stored without refrigeration for periods of six months or more, while maintaining chemical and sensory properties. Aseptic packages have numerous environmental and economical advantages, which compares to other packaging systems that use preservatives and/or refrigeration to achieve a long shelf life for food products.

Challenges to Growth

Pharmaceutical packaging

The global pharmaceutical packaging market has been predicted to double to $149bn in a decade, with India one of the markets currently producing a large quantity of plastic pharmaceutical packaging. Large multinational pharma packaging companies, such as Amcor, Huhtamaki, West Pharma and SGD Pharma, along with Indian companies, including UFlex and EsselPropack, lead the way within the country's pharma packaging market.One pharmaceutical challenge India faces is its heavily reliance on plastic packaging, which has triggered discussions on recycling and the lack of consumer knowledge in sustainability. In addition, India's pharmaceutical packaging market is working towards creating innovative features like digital timers and alarms on pill bottles, dose monitoring and innovative mechanised blister packs.

Retail packaging

The e-commerce retail packaging sector has grown to 65 million monthly unique visitors, accumulating an annual increase of 55%. India's e-commerce revenue is predicted to be the highest rate in the world, growing at an annual rate of 51% and increasing to $120bn in 2020 from $30bn in 2016, according to an ASSOCHAM-Forrester report. India's e-commerce retail market faces an increasing demand for rigid packaging, such as corrugated boxes and cartons due to the packaging's firm structure, preventing potential damage against India's poor road infrastructure. The rigid packaging category makes up 80% of the country's overall packaging market. However, with the Government's recent announcement to cut down plastic packaging by at least 40%, e-commerce giants have been working on eliminating single use plastics packaging, use of bio-degradable options and recyclable or reusable materials.

Food and beverage packaging

In recent years, India has seen sustainable packaging growth due to the increase of packaged food consumption and awareness, and demand for quality products. Consumer awareness surrounding packaged food, specifically packaged food deliveries, has heightened. Earlier this year, the Food Safety and Standards Authority of India (FSSAI) announced new packaging regulations to replace the former 2011 provisions. The new regulations comprise of a migration limit of 60mg/kg or 10mg/dm2 and migration limits for specific contaminates in plastic packaging materials. Recycled plastics and newspaper used for food packaging have also been banned. New labelling regulations were also revised. In terms of India's beverage packaging, materials such as glass and rigid plastics account for 70% of the total packaging market. PET is the material most used to package water, accounting for around 55% of India's packaged water sector.

Projected to reach a CAGR of 4.17% to $142.2bn by 2023, it is predicted that the nation will see continued demand for PET bottles, along with a new demand for liquid packaging cartons due to their longer shelf life and ease in transportation.

The Government of India is putting all the effort to spread and invest in science and technology in the Packaging Industry of India. The changing trends in this sector are immense because of change in consumer behaviour, technological innovations and the environmental impact for which the industry needs to ensure continuous evolution, innovation and advancements to adapt.

Technology Upgradation and Quality Certification

Financial Support to MSMEs in ZED Certification Scheme

Description

The objectives of the ZED Certification Scheme include inculcating Zero Defect & Zero Effect practices in manufacturing processes, ensure continuous improvement and support the Make in India initiative.

The ZED Certification scheme is an extensive drive to create proper awareness amongst MSMEs about ZED manufacturing, motivate them for assessment of their enterprise for ZED and support them accordingly. After the ZED assessment, MSMEs will be able to reduce wastage substantially, increase productivity, expand their market as IOPs, become vendors to CPSUs, have more IPRs, develop new products and processes etc.

The scheme envisages promotion of Zero Defect and Zero Effect (ZED) manufacturing amongst MSMEs and ZED Assessment for their certification so as to:

- Develop an Ecosystem for Zero Defect Manufacturing amongst MSME manufacturing units.
- Promote adaptation of Quality tools/systems and Energy Efficient manufacturing.
- Enable MSMEs for manufacturing of quality products.
- Encourage MSMEs to constantly upgrade their quality standards in products and processes.
- Drive manufacturing with adoption of Zero Defect production processes and without impacting the environment.
- Support 'Make in India' campaign.
- Develop professionals in the area of ZED manufacturing and certification.

Nature of Assistance

Assessment & Rating/Re-rating/Gap analysis/Hand holding

- The subsidy provided by the Government of India for Micro, Small & Medium Enterprises is 80%, 60% and 50% respectively. There is an additional subsidy of 5% for MSMEs owned SC/ST/women and MSMEs located in NER and J&K for assessment & rating/re-rating/gap analysis/hand holding.

1. For Assessment/Rating by empanelled Credit Rating Agencies/other Agencies valid for 4 years – the Ministry of MSME will subsidize* 80% of Micro, 60% of Small, 50% of Medium Enterprises' Certification Fee: average 70% of Fee. (Assessment Fee is Rs. 10,000/-& Rs 80,000/- per enterprise respectively for Desktop Assessment and ZED rating Complete Assessment).
2. Additional rating for Defence angle i.e. Defence ZED by empanelled Credit Rating Agencies/other Agencies valid for 4 years – the Ministry of MSME will subsidize* 80% of Micro, 60% of Small, 50% of Medium Enterprises' Certification Fee: average 70% of Fee. (Assessment Fee is Rs. 40,000/- per enterprise.)
3. Gap Analysis, Handholding, Consultancy for improving rating of MSMEs by Consultants through QCI/NPC, Field formations of O/o DC-MSME viz. MSME-DI, MSME-TC including its autonomous bodies, BEE etc. – the Ministry of MSME will subsidize* 80% of Micro, 60% of Small, 50% of Medium Enterprises' Consultancy charges: average 70% of Fee. (Hand holding charges is Rs. 1.9 Lakh per enterprise whereas in case of MSMEs owned by SC/ST entrepreneurs additional support of Rs 10,000/- will be provided)
4. Re-Assessment/Re-Rating by Credit Rating Agencies & Other Agencies – the Ministry of MSME will subsidize* 80% of Micro, 60% of Small, 50% of Medium Enterprises' Certification Fee: average 70% of Fee. (Assessment Fee is Rs. 40000/- per enterprise.).

Who can apply?

All manufacturing Micro, Small and Medium enterprises (MSME) having Udyog Aadhar Memorandum can apply.

How to apply?

The ZED Certification Scheme is a 4 steps process:

Step 1 : Register free on the online portal of ZED (www.zed.org.in), using the following link:

http://assessment.zed.org.in/Assessment/Assessment_BeforeLogin.aspx, using the valid (Indian) mobile number and email address.

Step 2 : Online self-assessment on the ZED parameters followed by Desktop Assessment.

Step 3 : Site-assessment, if selected on the basis of Desktop Assessment.

Step 4 : Consultancy: Rated MSMEs will have the option to avail the service of an authorized ZED consultant for gap-analysis and handholding.

Guidelines of "Financial Support to MSMEs in ZED Certification Scheme" (2019) is available on

http://dcmsme.gov.in/Approved-Final-guidelines-of-ZED-4.4.19.pdf

Know Your COA Member

Interview with Arvind Goenka, Managing Director, RMG Polyvinyl India Ltd., Vice-Chairman, Plexconcil

RMG Polyvinyl India Limited, is an ISO 9001:2008 system approved company manufacturing PVC Flooring & Vinyl floor covering, PVC films, sheeting and Artificial leather. As the largest manufacturer & exporter of PVC Floor Covering from India, and the company has been the recipient of the "Top Exporter" award from The Plastic Export Promotion Council - Ministry of Commerce, India for the past 10 years. With offices spread over all the major cities in India and a vast network of distributors and retailers for the domestic market, and the company exports to over 40 countries across the globe. Its state-of-the-art factory with the latest technology machineries, the company's range of products is manufactured as per international standards under the brand name "WONDERFLOOR".

"WONDERFLOOR" is a leading name in PVC vinyl floorings that boast superior quality, a wide product range and competitive pricing.

The company strongly believes in caring for the environment. Over the years, it has invested heavily in producing vinyl based floorings company and diligently works on the aesthetics of its floorings to make them seem natural. This ensures that the floorings become perfect substitutes for natural wood and stone, contributing significantly towards saving these natural products from depletion. The company also ensures through its various activities that it meets and adheres to all regulations pertaining to the protection of the environment.

Commencing his career with his family owned business in 1994, Arvind Goenka has been responsible for taking his production unit that printed a humble 7000 tonne of basic vinyl flooring annually to a company that produces over 35000 tonnes per annum of specialized, high-end flooring and is the undisputed number one manufacturer of floorings in India.

From a production figure of just 4 million sq. mtr. (6000 MT), the company increased the production figure to more that 17 million sq. mtr. of PVC floor covering, a phenomenal 5 times increase, in just 10 years. Today, RMG is a renowned for the supply of an entire range of floor coverings, including PVC floorings, PVC floor tiles and wooden laminates in India. Plans are also afoot to produce a wide range of special products, which are presently being imported from European countries.
Under the "Make in India' initiative, RMG Polyvinyl India Limited has also tied up with a reputed European manufacturer to produce world-class PVC membranes for water proofing of civil structures.

What inspired you to commence your career in the PVC floorings segment?

The business was started by my father and during college days I used to visit our factory for training. It was then that my father sent me to our collaborator in Germany for making me aware about processes & products adopted in Europe. With these, I developed interest in PVC processing and production activities. Although I had opportunity sometime in early 2000 to change my career and shift to PP woven sacks business, I decided to carry on with the PVC flooring business.

How has the industry evolved or changed since you first started?

Plastics processing has adopted automation in a big way. Raw material handling & mixing is nearly labour free now. Packing is automatic as in factories in Europe. Thickness measurement & controls are also all automatic. On the product side, floorings are now easy to clean, scratch resistant and producers can offer warranties upto 10 years. Aesthetically the floorings once installed look like a natural wood or stone flooring and it is difficult to be correctly identified by a lay man.

What are the current developments in the industry? Where do you see the industry go in the coming years?

PVC flooring is a long lifecycle product and the recyclable content in floorings is increasing in European countries so as to make it highly sustainable. This will happen in India soon as well. As air conditioning is becoming popular in India and the labour cost for installing stone or ceramic floorings are increasing, use of vinyl floors will greatly increase as it is one of the best alternatives when replacing existing worn out floors.

What are the key drivers for the growth of the industry and exports from India?

The Indian consumer is now spending lavishly on beautifying homes & offices. For such consumers, vinyl floorings are competitively priced and can be installed very quickly – within hours. Similarly, Hospitals, schools & the transport sector are now mostly offering airconditioned spaces and they have realized the benefits of vinyl floors which offer very good sound & thermal insulation and aesthetically enhance the interiors. With newer technology, maintaining & cleaning vinyl floors is very easy. We see a growing market in India but products will have to match rising consumer expectation at very competitive pricing due to cheap imports from China & other NEA countries.

What is the role of technology and design in the industry? Where does our country stand in terms of innovation and design?

As mentioned above, it is very important to employ latest technology to keep costs in check and offer high performance products. Labour & energy cost is rising rapidly and import duties are falling due to FTA's leading to a plethora of imported goods at very competitive prices, so domestic manufacturers have to fight on both fronts to maintain their market share which is only possible by upgrading to newer technology.

As in other industries, design is also very important nowadays due to consumers changing preferences.

Our country is not the torchbearer in these areas. We have to depend upon European & American technology. We feel as there will be growth in the vinyl flooring market, technology & design capabilities will also increase domestically.

Wonderfloor today is the largest PVC flooring and covering brand in the country. What have been the drivers for its success?

Lot of hard work by the team at Wonderfloor and good wishes from friends & family have resulted into Wonderfloor's success. At Wonderfloor, the goal is to provide value for money to the consumer. If he is paying a high price he must be fully satisfied with the quality & service and if he is buying a cost-effective product, he should not feel cheated. This ensures that factory is very careful in working out the right formulation for every product and reasonable R&D is done before it is launched.

Efforts are made to offer all types of vinyl floorings to consumers under one umbrella, even if it requires us to get some product range produced by contract manufacturing abroad.

Which countries or regions enjoy a high demand or offer great potential for your products?

Main markets are the Gulf countries, African countries and neighboring countries. Europe is a large market and a large producer of vinyl floorings and they prefer to use their native products. USA is a much larger market but hardly there is presence of Indian goods as Chinese goods are much cheaper in prices. Now with the ongoing USA-China Trade War, Indian products could be in demand there. South America is again a good market but Indian products are not very popular there due to freight costs and transit time.

In your opinion, what is the kind of support, in terms of infrastructure and/or policies that are needed to boost the growth of this industry?

Vinyl floors are made from PVC which is in short supply in India leading to higher raw material cost as compared to China & other Asian producers, making it difficult to fight competition. Govt should support the industry by allowing import of Pre-Consumer PVC surplus which will reduce raw material cost and set up a regulatory body to ensure shipping costs for both exports & imports cargo are competitive. Since the use of vinyl floorings are replacing wood & stone floorings and thereby conserving our natural resources, the Government should offer reduced electricity charges to the industry. Facilities at inland ports should be improved to ensure containers can get loaded on vessels at sea ports within 48-72 hours after being handed over by the exporter.

There is a rising demand to ban limit the use of plastics and plastics base products globally with stringent laws being framed for recycling and/ or disposal of non-recyclable plastics? How does this impact the product segment?

This ban does not affect our industry. Firstly, Vinyl floorings are long life cycle products. Secondly, large percentage of recycled content from post-consumer plastics can be incorporated in Vinyl floorings thereb-converting scrap into a longlife cycle product. Mainly the poly-ethylene based products fall under the single use

plastic product ban. Since PVC is easily recyclable and its quantity is significantly smaller than poly-ethylene based products, PVC products generally do not fall under such ban.

However, with the growing awareness in consumers for plastics, we feel extended producer responsibility (EPR) may get implemented on Vinyl flooring producers as well after a couple of years somewhat on the lines of AgPR-Germany where post-consumer vinyl flooring scrap is collected & ground and every producer must buy it and reuse it again in their finished goods.

What are the typical challenges faced by the trade in this segment today? How have the challenges evolved since you first commenced operations?

Typical challenges are cheap imports under FTA and raw material availability at competitive prices. In the past, if the industry was labour intensive, it was not an issue but today automation is necessary. Earlier it was easier to bear finance cost but in today's time, sales made on credit is painful due to high finance cost. In modern times, changing consumer preference necessitates continuous capital investment which was not the case in the past.

What are your plans for future expansions or exploring new areas for growth?

We have grown consistently over the last 15 years and production has increased by 600%. We are gradually adding capacity keeping in mind consumer preferences. Presently we are focusing on the vinyl flooring market and would prefer to grow this business.

What is your mantra for success? What would you like to convey to the new age entrepreneurs?

Utmost faith & confidence in my team is what I believe in and I would attribute our success to that.

New age entrepreneurs should tread cautiously and focus on niche segments or in segments where they have an USP. In today's time, multinationals are setting foot on Indian soil with access to latest technology and cheap finance cost, both of which is not easily available to budding entrepreneurs.

Human Hair Panel

Human hair product panel includes – Human hair unworked, whether or not washed or scoured; Waste of human hair; Human hair, dressed, thinned, bleached or otherwise worked; Wigs of human hair; Hair nets of human hair; and Other products of human hair.

World-wide import of human hair products is above USD 1.6 billion.

- In 2018, top-5 exporting countries of Human hair products were: China (57%), India (13.6%), Hong Kong (7.2%), Indonesia (5.3%), and United States (3.7%).
- Likewise, top-5 importing countries of these products were: United States (41.5%), China (12.2%), Hong Kong (6.7%), Indonesia (5.4%), and United Kingdom (4.7%).

India was ranked as the second largest exporter of human hair products in the world. Major destination countries for export of Human hair products from India are: China (58.9%), Myanmar (11.2%), United States (6.2%), Tunisia (3.9%) and Hong Kong (3.4%).

India's export of Human hair products was valued at USD 248 million in 2018. Unfortunately, the human hair segment has witnessed a decline in exports over the years due to problems being faced in the form of rampant smuggling and under-invoicing of human hair exports by some unscrupulous traders, as informed by the Human Hair and Hair Products Manufacturers and Exporters Association of India.

HS Code	Product Description	2015	2016	2017	2018
		USD Mn	USD Mn	USD Mn	USD Mn
05010010	Human hair unworked, whether or not washed or scoured	26.3	46.1	27.7	34.6
05010020	Waste of human hair	10.7	10.6	7.5	0.5
67030010	Human hair, dressed, thinned, bleached or otherwise worked	281.9	237.3	234.3	212.6
67042010	Wigs of human hair	0.02	0.01	-	0.17
67042020	Hair nets of human hair	-	-	-	-
67042090	Other products of human hair	3.9	4.3	2.3	0.3

Source: Ministry of Commerce & Industry

However, India's export of human hair, by quantity, presents a different picture and shows that export of human hair witnessed a positive growth between 2015-18.

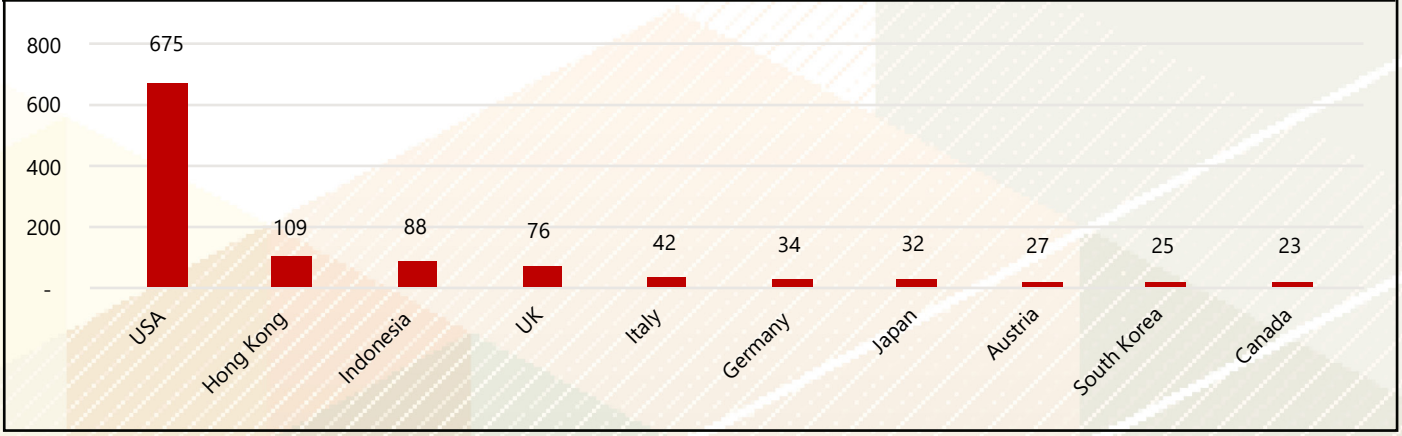
HS Code	Product Description	2015	2016	2017	2018
		Tonne	Tonne	Tonne	Tonne
05010010	Human hair unworked, whether or not washed or scoured	645.5	921.2	1280.5	1693.8
05010020	Waste of human hair	558.8	614.9	640.5	167.2
67030010	Human hair, dressed, thinned, bleached or otherwise worked	3068.6	2894.8	2974.9	2809.2
67042010	Wigs of human hair	1.4	2.5	0.4	0.7
67042020	Hair nets of human hair	0.01	0.02	-	-
67042090	Other products of human hair	33.8	31.4	8.7	7.1

Source: Ministry of Commerce & Industry

Discussions with exporters of human hair products revealed that the above was because many of the Indian exporters have shifted their focus to selling short hair to keep the business running and fulfil orders due to reduced supply of good quality human hair (those above 6 inches etc.) which enjoys superior pricing in the international market. They allege that the superior quality human hair is being acquired by unscrupulous traders who engage in smuggling and by foreign buyers who travel to India on visitor visa and make cash purchases.

Our internal research indicates that India's human hair exports has immense potential for growth in destinations like United States of America, Hong Kong, Indonesia, United Kingdom, Italy, Germany, Japan, Austria, South Korea and Canada.

Import of Human hair and products in USD Million - 2018



Source: Trade Map, Plexconcil Research

Some of the large players in human hair export business in India include: Srinivasa Hair Industries Pvt Ltd, Indian Hair Industries Pvt Ltd, DCS International Trading Co., Vasavi Exports, Ravi Enterprises and others. Below are excerpts from our interview with some of the top exporters of human hair products

Industry Speak

M. Somasundaram, Proprietor, TEMPLE HAIR IMEX

While the demand for human has been growing and remains very high globally, Indian exports has seen a slow down due to severe competition, especially from China. Other factors include delay in regulation of industrial approvals, pending improvisation of the Factory Act, development of infrastructure, especially roads, sewage, water supply and street lights are critical as most comb waste is collected from rural areas that still lack basic amenities and infrastructure. All these factors together could be attributed to the decline of the human hair industry.

In terms of exports, India is a major supplier of Goli and hence also a major barrier to its forward integration into value added products. If import duties are reduced or exempted on technology that is needed for further processing or production of value-added products, it would immensely help in boosting exports. Presently, USA is the major export destination for Human Hair products. Africa is another important destination with export potential that we see coming years.

Given the superior quality of Indian Human hair, our industry has immense potential to become a leading exporter of the product. Currently, the industry is limited to certain states in the country only. However, with the right infrastructure, duty structures, limitation on raw material export, incentives and support to bring in latest technologies and knowledge as well as a better labour laws, our industry can grow in mammoth proportions while also extending its presence across the country. This would result in increased capacities to meet the growing global demand for Human Hair and Human Hair products. Today, we are only able to realize a small part of our industries potential while demand for Human Hair products has seen sharp increase. There is talk synthetic hair threatening our industry. However, not only can synthetic not provide the same look, feel, and quality of natural hair, it is also unhealthy and its use must be restricted globally.

Benjamin Cherian Chairman - Raj Hair International Pvt. Ltd Panel Chairman- Human Hair & Hair Products

How has the human hair industry evolved or changed globally in the last few decades?

Throughout history, hair has played a significant role in our society. It is associated with youthfulness and beauty in women and virility and masculinity in men. Hair has long been an indicator of both social and professional status, particularly celebrities.

Today, long hair is still seen as a symbol of youth and beauty; the fashion for hair extensions has taken the world by storm, with many celebrities sporting long hair extensions on a daily basis. Hence, the Human Hair Wig Industry has become one of the most important industries in the world.

Exports of human hair has dipped from its peak at $460 million in 2011-12 to about $250 million in 2018-19. What are the reasons for this decline?

20 years back the biggest competitor for us in the field of Human Hair export was China. Today 95% of Non-Remy hair from India is exported to China, made into value added products viz mannequins, Hair pieces, etc and marketed all over the world because without the Indian hair they cannot make the finest products. China has excellent manufacturing facilities and tie-ups with the marketing companies in America, Europe and also factories in different countries in Africa. Thus, China has been assured of raw material while at the same time depriving Indian Human Hair Industry.

Now they have taken the route of smuggling raw material through Bangladesh, Myanmar borders where they have processing factories and the respective Governments in Myanmar give incentives for export of finished products and it is sent across the border to China.

India is the largest exporter of raw material, or Goli, in the Human Hair segment globally. What are the barriers that impact its forward integration into value added products?

As explained above, we don't have the manufacturing techniques in wig making or value-added products to increase the value of our exports. We export raw materials or semi processed hair like remy and non-remy hair

to China, from there they make value-added products and sell it to European, American and African markets. Many Chinese companies have their own companies in US and Africa and sell their brands.

What are the kinds of technologies that are needed to develop and enhance exports of value-added products?

We need help from the Ministry of Commerce and also from Ministry of Science and Technology to fund and bring technicians and technical know-how and the latest trends in manufacturing techniques in wig making and other value-added products from Korea, China. They could be brought in to train our exporters/entrepreneurs in providing several value added products.

What are the kinds of incentives or support required from the Government for technology advancement in the segment?

Today whoever could manufacture best products at the best price has a market. For achieving this, we need to import technology from China or Korea who have the best expertise in this trade and who can train Indian Entrepreneurs and exporters to give more value addition.

Also support with some sort of incentive because this is the industry which converts waste into foreign exchange.

We can also set up one or two hair industrial parks in Koppal in Karnataka or in west Bengal where the hair trade for non-remy hair is centred, where Human Hair industry leaders and exporters can set up plants in joint venture with China/ Korea or any other countries taking advantage of not only the cheap labour but also the abundant raw material for hair. India is the largest producer of natural hair, accounting for about 80% of world supply.

Nearly 85% of exports comes from comb waste that comes from unorganized sector, collected by women and ragpickers, of which 95% comes from only 5 states. What are the incentives or measures that are needed to better organize and transform it into a formal industry as well as expand the industry's presence nation-wide?

Today 80% of the world supply of hair both Remy and non-Remy is supplied from India. 95% of Non-Remy hair from India is from comb waste. The comb waste is collected by illiterate women, rag pickers, accumulated in large quantity, further washed, processed, graded and made to an exportable state. In fact this scheme of collecting Comb Waste can be implemented in every village in India which can substantially ensure the quantity of human hair. This is the only industry contributing immensely to 'Swatch Bharath' campaign of our Prime Minister by keeping environment clean by collecting waste hair and providing employment to both men and women belonging to the lowest rung in the society. This industry also earns phenomenal foreign exchange earnings and should be recognised as one of the prime industry to get all support and encouragement.

This idea has been suggested by our Association HHHPMEAI (Human hair & Hair Products Manufacturers, Exporters Association of India) to Commerce Ministry and they have also recommended to adopt the scheme of collecting comb waste hair in every village to Ministry of Rural Development in 2016.

Additional incentive to be given for value added products Like Wigs so that the exporters are motivated to implement value addition to the existing line of business in the coming years.

Ease of doing business by sending raw materials to foreign countries for job work and bring them back, particularly from Korea and China, in finished form for the purpose of export.

How has the rising preference for synthetic hair which is cheaper and better in terms of quality impacted the natural human hair industry?

World demand for Human hair is so high even today natural hair meets only 30% of the demand and balance 70% of the demand is met by Synthetic hair. These products do not last long like Natural hair and products and wigs will not have comfort, style or feel when you wear synthetic hair products.

Which are the major export destinations for Human hair products? Which are the other destinations with export potential in coming year?

Our major destination is U.S.A. South America and Countries in Africa are the potential destination for Human Hai & Hair Products.

Indian Hair is the most demanded hair in the world because it is thin and it is equivalent to Caucasian Hair. Hence people in US and European countries prefer Indian Hair which can match their hair texture. That is why Chinese mix the Indian hair with Chinese Hair and sell the finished products to European, American, African Markets.

What, in your opinion, could be the impact of RCEP on the Human Hair segment, considering that China is part of RCEP, a major importer of Indian raw material in the segment as well as a major competitor to our industry?

The impact of RCEP may be significant. At present, China levies duty for the import of Human Hair, which imports 90% of our raw material. Under this RCEP agreement, free trade duty will not be levied which will make them get their raw materials to their factories without import duty. In my opinion, this will make us remain just raw material suppliers not established manufacturers or producers of Human Hair & Hair products like China in the longer run.

What is the kind of support that the segment hopes to receive from the Government to not only revive exports, but also surpass its past record?

- To ban the movement of raw material like chutti both legally and illegally which is being carried out at present
- To restrict under invoicing by fixing minimum exportable price for every 6 months provided by Human hair association
- Bring all exports of above 100/150kgs under Export Inspection Agency.

Since millions of people of lowest strata are involved in the collection, cleaning and processing, and also Human Hair being labour intensive industry, the labour policy connected to this trade should be lenient and easy to work with by the manufacturers.

- We need help from the Ministry of Commerce and also from Ministry of Science and Technology to bring latest trends in manufacturing techniques from Korea, China under which technicians could be brought in to train our workers in several value added products and latest wigs processing techniques
- Additional incentive to be given for value added products like Wigs so that the exporters are motivated to implement value addition to the existing line of business.
- Biggest market for Remy hair is Brazil and African countries, where there is high duty structure which is a hindrance for our export. We would request the Ministry of Commerce and Industries to negotiate with these countries on trade agreement for reducing duty burden of Human Hair so that the exports can be increased substantially. Other important African countries with whom we need concessional tariff will be Nigeria, South Africa, Ghana, and Angola.

The Role of Plastics in Renewable Energy

Wind and solar energy were described as two significant renewable technologies, with the BNEF NEO predicting that almost 50% of global energy will come from wind and solar power. Renewables as a whole are expected to contribute 62% of the world's energy demands by 2050, with 31% coming from fossil fuels and oil being phased out around 2030.

In the coming year, trends likely to affect renewable growth include government initiatives that support renewables, increasing investor interest, and advanced technologies that boost wind and solar energy's value to the grid, asset owners, and customers.

Renewable Energy Industry Overview

Global renewable energy market valued approximately USD 1,486.3 billion in 2017 is anticipated to grow with a healthy growth rate of more than 4.90 % over the forecast period 2018-2025. Government funding and continuous technological advancements are considered among the major trends for the renewable energy market. Additionally, rising awareness about carbon footprint management is also expected to create lucrative growth prospects for the renewable energy market across the globe during the forecast period.

Government initiatives to promote renewable energy sources works as a key driving factor for the renewable energy market across the globe. Government and public administration across the globe are investing in key projects related to renewable energy. According to Frankfurt School & United Nations Environment Programme Collaborating Centre (FS-UNEP), investment within renewable energy sector is bound to increase from $312 billion in 2015 to $392 billion by 2020. Solar and wind energy continues to be prime choice for investment.

Market Segmentation

On the basis of segmentation, the renewable energy market is segmented into type and end-user. The type segment of renewable energy market is classified into hydro & ocean power, wind energy, solar energy, bio energy and geothermal energy of which solar energy segment is anticipated to be the lucrative segment owing to the owing to the government initiatives promoting the solar energy. On the basis of end-user segment, the market is bifurcated into commercial, residential and industrial & others of which commercial segment is expected to dominate the market owing to the increasing demand of energy.

The regional analysis of Renewable Energy market is considered for the key regions such as North America, Europe, Asia Pacific, Latin America and ROW. Asia-Pacific dominates the Renewable Energy market owing to government efforts to promote the renewable energy along with increasing demand of energy. Whereas, Europe is anticipated to emerge as the fastest growing market region during the forecast period 2018-2025

owing to stringent government environmental policies imposed on industrial sector along with government initiatives to promote renewable energy. Also, the growth of Asia-Pacific region is witnessed owing to the rapid industrialization and urbanization.

India Forecast for Renewable Energy

India's renewable energy capacity has crossed the 80GW-mark, which includes 29.55 GW of solar energy and 36.37 GW wind power. The government has set an ambitious target of having 175 GW of clean energy capacity by 2022, including 100 GW solar and 60 GW of wind energy.

In a recent announcement to battle climate change, the Ministry of New and Renewable Energy revealed its ambitious aim to set up 500 gigawatts (GW) of renewable energy capacity by 2030 in what could potentially help the country reshape the global energy market dynamics. The announcement comes against the backdrop of the Indian government running the world's largest renewable energy programme and plans to achieve 175GW of renewable energy capacity by 2022 as part of its climate commitments. India currently has an installed renewable energy capacity of around 80 gigawatts.

Of the targeted 175GW, 100GW is to come from solar projects. It will comprise 60GW from ground-mounted, grid-connected projects, and 40GW from solar rooftop projects. Wind power projects will contribute 60GW. The government plans come with the government's agenda of providing reliable, sustainable and affordable electricity to the masses in its second term and focusing on changing the energy mix towards green energy sources.

Plastics In Wind & Solar Energy

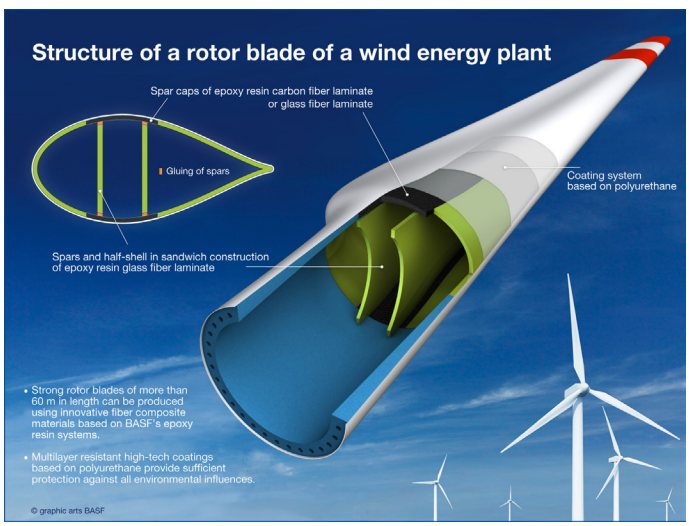
With an urgent need to save on non-renewable fossil fuels, there has been growing momentum world over to increasingly use wind and solar sources to produce electricity than the conventional nuclear power stations or thermal power considering the scarcity of such resource. The focus is on increasing low-carbon energy sources to meet the electricity requirement of countries and thereby not only curb global warming but also conserve the depleting fossil fuels.

Playing its part in all of this is plastic. There is little doubt that the world is generating more plastic waste than we are able to dispose. Recycling, upcycling, circular economies are the new age mantra and Plastic materials can go a long way in contributing to the health of the planet and helping to reduce the environmental footprint of energy production. Here's a look at how:

Wind turbines

Wind turbines only earn money in operation. Use of Plastics for efficient and low-maintenance wind turbines improves the effectiveness of their wind turbines and reduce their downtimes. For a wind turbine to have high-performance, be reliable and operationally safe even at high stress, composites and thermoplastics are most commonly used.

The wind spins the turbine blades around a rotor. The rotor turns a generator, which produces electricity. The blades made of light-weight plastic composites create durable, aerodynamic blades in order to spin faster and researchers and engineers are constantly experimenting with innovative materials to lighten the blades. Depending on the material, very light-weight, while being highly resilient and with very good sliding properties are most preferred.

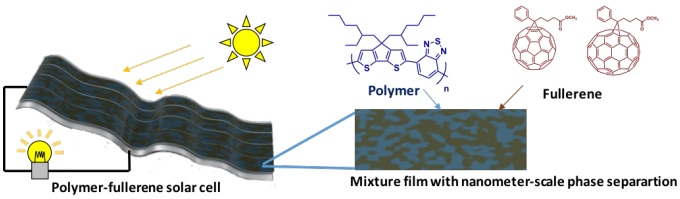


As materials advance, the blades have become tougher and lighter while scientists from the University of Cambridge and three U.S. institutions are developing a new coating for turbine blades that imitates the features that enable owls to fly so quietly. Wind turbines could spin more quickly and generate more power by applying this technology.

Solar cells

Solar panels already use plastics to protect or connect some of its parts. Now plastic-based solar cells are expected to enter the market in the not-to-distant future. Plastic solar cells, based on blends of conducting organic polymers, are lightweight and cheap. The problem with these kinds of solar cells is that their solar-power efficiencies relate to the way the different types of materials mix and crystalize in thin films. This means complex and careful processing is usually needed to make efficient polymer solar cells.

A team of researchers at Osaka University in Japan, in collaboration with the Max Planck Institute for Polymer Research in Germany, have invented a polymer that is easy to manufacture and has excellent conversion efficiency of solar power to electricity.



In the midst of a massive drive to harness solar energy to power our homes, gadgets and industries, plastic solar cells, based on blends of conducting organic polymers, are of interest for making lightweight and cheap solar cells. However, the power efficiencies of these solar cells are very closely related to the way the different types of materials mix and crystallize in thin films. This means complex and careful processing is usually needed to make efficient polymer solar cells.

The research states that a polymer that is simple to fabricate but has excellent power conversion efficiency has been devised to improve the polymer's conductivity, which in turn enhances its solar power conversion efficiency.

Energy Recovery

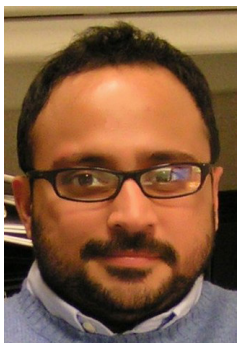
Scientists have found a way to recycle plastics to create high value materials such as carbon nanotubes, which can not only conduct heat and electricity but also help reduce plastic waste.

While a small proportion of the hundreds of types of plastics can be recycled by conventional technology, researchers have found that there are other things that can be done to reuse plastics after they have served their original purpose. A research, published in The Journal for Carbon Research, focuses on chemical recycling which uses the constituent elements of the plastic to make new materials.

While all plastics are made of carbon, hydrogen and sometimes oxygen, the amounts and arrangements of these three elements make each plastic unique and can be broken down into these elements and then bonded in different arrangements to make high value materials such as carbon nanotubes.

Carbon nanotubes are tiny molecules with incredible physical properties and can be used to make a wide range of things, such as conductive films for touchscreen displays, flexible electronics fabrics that create energy, antennas for 5G networks, etc.

Industry Speak



Abhishek Gupta
Suniboat Technologies Pvt. Ltd

What are the types of plastic based products that find application in the Solar Energy sector?

Plastics and polymer-based products enjoy wide application and in various forms within the solar energy segment. While traditionally, glass is the preferred medium considering its cost, clarity and longevity, especially for the panels, with the right technology, design and raw material used, there exist immense opportunities for plastics within this segment as well.

What are the advancements that have been witnessed within the segment vis-à-vis plastics, composites, polymers, etc?

The solar energy segment itself has evolved and grown immensely in the last over a decade or so. While most advancements in technology, manufacturing process, raw material etc. have taken place globally, India, despite having the resource and talent, still falls behind the likes of China, which has huge capacities and capabilities and meets the needs of the Indian market as well. While in India, there hasn't been any new breakthrough advancement that has been developed yet, the solar energy sector has immense potential for the plastics industry. The number of opportunities present in the solar energy segment can be a game changer if the plastics industry is ready to take a leadership position by investing in and exploring every opportunity through R&D, innovation and technology to indigenously develop world class products that could actually set benchmarks for the global plastics industry.

At Suniboat, we ourselves have invested years of study, research and development and today, we are proud to have perfected our recently introduced floating solar solutions. Having established a perfect balance with the right materials, the right manufacturing technologies and right design, we have created impeccable solutions for floating solar farms that deliver reliability and quality on every project.

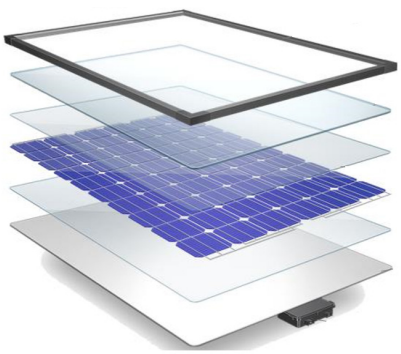
What are the opportunities for plastics in the segment, globally and in India? In your opinion, how can plastics-based products impact or improve solar energy solutions in terms of design, efficiency, costs, etc?

The opportunities within the solar energy segment are immense and many of these are yet to be fully exploited to achieve their peak potential. Some of these are as explained below:

Floating Solar solutions is an industry with immense global opportunities. A World Bank Report speaks of a global requirement of nearly 4000 GW and if even 10% of this potential is to be met, it could result in unprecedented growth for the plastics industry. For example:

1. Floating Solar panels use Polyethylene of a certain grade and powder size. These are currently unavailable in India and therefore we are compelled to import. The raw material, even if available, are not of the required fineness or grade. However, with the right manufacturing technologies, manufacturers can achieve the right fineness and quality grade, which would become immensely beneficial for companies such as our own and cut down reliance on imports.

2. A typical solar panel has a glass top and a white back sheet, while cells are sandwiched in resins between the two sheets. This white back sheet of a floating solar panel, over a period of time, generally turns opaque. However, if the white sheet can be replaced with transparent plastics, the solar panel can become bi-facial and hence result in better absorption of sunlight. While the initial cost would be considered as an impediment, the benefits of having such a product would result in increased application and eventually outweigh the cost of inputs for manufacturers while improving the performance of the panel with better output capacity.



3. The frames of solar panels typically use MS or GI. However, given the inherent adavantages of plastics, ie. its tensile strength, flexibility, light-weight, and durability, the industry should explore product variants that could make for a path-breaking alternate to the current MS & GI pipes that are being used.

We are the first company to use FRP composite based products in our module installations and this has proven extremely successful. However, the supply chain lacks in scale as well as incremental value currently. Nevertheless, this is another great opportunity for plastics industry to consider.

Renewable and clean energy is the way forward world over. Hence, while initial investments can seem daunting, careful consideration of the economics of demand and supply, right through from design to delivery, would reveal the several areas of application in solar energy that could benefit immensely from the plastics industry, provided that manufacturers are able create products of the best quality, on a large scale.

Where does the industry stand today in terms of integration of recycled plastics in the manufacturing of components in the solar energy segment?

The renewable energy segment has placed quite a constraint on the plastics industry. Solar energy requires components that are designed for outdoor use and perform under changing climatic conditions. And these solutions are also expected to have a shelf life of 20-25 years. Floating solar panels are placed directly on water surfaces.

While a few years ago, perhaps as the use of plastics in the industry was limited, use of recycled plastics was considered acceptable. However, the shelf life of recycled plastics versus virgin plastics is limited. Furthermore, use of any recycled plastic could result in compromised quality as when this degenerates, we would risk releasing harmful toxins into water bodies, as in the case of floating solar panels.

Having said that, the industry needs to consider all the underlying conditions and explore, study and develop materials without any sort of compromise on quality as the impact of the wrong plastics, recycled or otherwise on the ecology is direct and can be devastating in the long run.

The industry with the involvement of the Government needs to develop a framework that defines the kind of plastics that may be recycled for use in the solar segment. Grades also need to be established for such plastics and independent testing and quality checks and

standards need to be developed to ensure that recycled plastics if and when used match the parameters of the solar energy segment.

What are the typical challenges faced by the industry in promoting the growth of the segment?

While the renewable energy segment has been growing significantly, allied industries have not kept pace. India itself is growing on the back of Chinese imports as there are insufficient comparable options currently available. The plastics industry in India today, as far as solar energy segment is concerned, has huge scope for improvement. Presently, we rely heavily on imports as we sorely lack in the availability of the required grade of polymers and manufacturing technologies that would facilitate the production of the required grade of composites, additives, etc. in India. This is an important factor as one needs to consider the environmental impact of floating solar panels, which when manufactured using inappropriate material can lead to not just early wear and tear of the modules, but even more significantly could end up leaking toxins into the waterbodies.

Today, as most of requirement is met through imports, in many cases it can be challenging for solar solution providers' viability. The need of the hour therefore is to employ iterative research to develop the right components, improve the quality of polymers, adopt the best technologies in manufacturing and assume a leadership position with the determination that our industry and our country has the wherewithal to develop new standards in the industry that become benchmarks for the plastics industries across the globe. A win-win situation for both the solar energy and plastics industry.

Test Beds are available across Europe and other parts of the world. The Indian Government funds groups of companies within the segment to test their installations and allow them to compete in a fair market. However, despite the availability of such facilities, solution providers have failed to take advantage of it.

Manufacturing sectors need to take into account economies of the industry as well as the market if they are to realize the complete potential of the opportunities present. Floating solar solutions for example, are still at a nascent stage, but present immense potential for growth for allied industries.

Demand for high quality is a global norm and our industries need to look beyond our borders. From traders, our industry needs to become creators. This is not an impossible task as the solar segment continues to evolve and improve; and with it opens up greater opportunities for our industries.

India has a target of generating 175 GW clean energy by 2022 while globally, the target is to source 62% of energy requirements from renewable sources by 2050. What are the measures that need to be taken by the industry to gear up and meet the targets set?

Our industry needs build the capacities and capabilities to manufacture the right quality of products that are globally competitive. Delivering competitiveness does not under any circumstance mean cutting back on the quality of materials used as the impact of such action can be severely detrimental to the growth of the industry and contrary to the global objective of reducing pollutants into the ecology.

Today, we need to invest in the right resources, advanced manufacturing technologies, R&D and innovation so that we can deliver better, faster and more.

The 3 most critical aspects to focus on would be:

- Right material to ensure longevity for the products. Solar panels are expected to have a shelf life of 20-25 years.
- Right design to ensure best performance and output
- Right manufacturing technologies that ensure improved production efficiencies, speed, scale and costs.

We need to be ready to deliver at the pace that the market demands while evolving to the point that is required. The industry needs to avoid repeating inefficiencies and focus should be on increasing the scale & quality of output.

Varunkumar V Velumani, Managing Director, Siva Windturbine India Pvt. Ltd

What are the types of plastic based products that find application in the Wind Energy sector?

There are several applications for plastics in the Wind energy sector. Some of these include Rotor blades, Nacelle Cover, Nose cone, Safety covers, etc.

What are the opportunities for plastics in the segment, globally and in India?

Renewables including wind energy is fast growing segment in which plastics do have significant usage. Rotor blades, Nacelle Covers or House, nose cones, mainshaft covers, made out of epoxy and polyster fibreglass plastics do not have alternative and are critical parts in wind turbine generators.

In your opinion, how has the use of plastics-based products impacted or improved wind energy solutions in terms of design, efficiency, costs, etc?

A wind turbine cannot be complete without FRP Rotor blades which are under constant development in size and aerodynamic efficiency that are crucial in capex and output.

Where does the industry stand today in terms of integration of recycled plastics in the manufacturing of components (blades, etc) in the wind energy segment?
To our knowledge, recycled plastics are not used in a wind turbine yet. However, with further research, there could be new possibilities in the future.

What are the typical challenges faced by the industry in promoting the growth of the segment? (Please briefly outline the impact of the challenges faced by the segment and its impact on manufacturing of plastic based components).

Challenges faced by the industry worldwide revolves typically around policies adopted by governments in the region. Apart from the regulatory hurdles, poor infrastructure in India.,i.e., logistics to transport heavy parts on road, adequate crane size capacity being unavailable in India and in most regions of the world, to manufacture and install WEG capacity of more than 3 megawatt. Also, adequate mould making infrastructure and support from the government is greatly lacking considering the limited knowledge and ability of the industry in high quality manufacturing for the sector.

India has a target of generating 175 GW clean energy by 2022 while globally, the target is to source 62% of energy requirements from renewable sources. What are the measures that need to be taken by the industry to gear up and meet the targets set?

1. Stable policy by state and central govts.
2. Local clearances – all
3. Power evacuation and Grid management – optimum utilisation of renewable output.
4. Support for development of Indigenous technology MW capacity turbines.
5. Several other factors – including realistic LCOE – Rs.2.44/kwh unrealistic longterm.

IEMs signed in the Plastics segment during July 2019

IEM No.	Company Name	State	Item of manufacture
1227	Macpro Technologies Private Limited	Andhra Pradesh	Plastic injection moulded parts
1318	Rahil (CCP) Films Private Limited	Gujarat	CPP film
1397	Sidwin Fabrics Private Limited	Gujarat	PP spun bond non-woven fabrics
1213	Param Packaging Private Limited	Gujarat	Other plastics products
1401	Bprex Pharma Packaging (India) Private Limited	Karnataka	Hygienic plastic containers
1326	Vectus Industries Limited	Karnataka	Plastic pipes
1299	Vectus Industries Limited	Madhya Pradesh	Injection moulded products
1338	Alpha Foam Limited	Maharashtra	Polyethylene Foam
1345	Astral Poly Technik Limited	Odisha	CPVC pipes
1380	Sood Packagers	Punjab	Flexible printed & laminated plastic film
1263	Le Mei Plastic Manufacturing Private Limited	Uttar Pradesh	Other plastics products
1255	BDG Polymers Private Limited	West Bengal	Bio-degradable plastics
1193	Sunrise Tanks Private Limited	Chhattisgarh	Water tanks
1270	Premium Plastic LLP	Jharkhand	PVC flex sheet

Business Inquiries

Name	: Shunsuke Kobayashi
Company	: Daisaku Co. Ltd
Address	: 1-39-6, Ayase, Adachi-Ku, Tokyo, Japan
Email	: export@daisakutrading.com
Contact	: +81 356296768
Enquiry	: Buyer is interested in importing FIBC (HS code 630532) from India.

Name	: Hidenori Onodera
Company	: Honda Trading
Address	: Tang 8, Toa nha Mat troi song Hong, So 23 Phan Chu Trinh, Hanoi, Viet Nam
Email	: hidenori-onodera@hondatrading.com.vn
Contact	: +84 936567780
Enquiry	: Buyer is interested in importing plastics raw materials from India.

Name	: Nguyen Tan Thong
Company	: Namdan Ever Growing
Address	: 11 Le Binh St, W.4, D.Tan Binh, HCMC, Viet Nam
Email	: tanthong@namdan.com.vn
Contact	: +84 977778177
Enquiry	: Buyer is interested in importing masterbatches from India.

Name	: Duong Thi Thanh Thuy
Company	: Trieu Du Bon Plastics Production Co. Ltd
Address	: Lot 15-17, No. 1 Street, Tan Tao Industrial Zone, Binh Tan, Ho Chi Minh City, Viet Nam
Email	: thuygl1202@gmail.com
Contact	: +84 961666638
Enquiry	: Buyer is interested in importing plastics raw materials and plastic pipes.

Name	: Cindy
Company	: Perchem Vietnam Co. Ltd
Address	: 75/5 Nguyen Cuu Van Street, Ward 17, Binh Thanh District, Ho Chi Minh City, Viet Nam
Email	: pcsupervisor@perchemvn.com
Contact	: +84 909803849
Enquiry	: Buyer is interested in importing Black Masterbatches from India.

Name	: Simon Boakye
Company	: Simb Fabrics Designing & Trading Enterprise
Address	: PO Box 9226, Kumasi, Ghana
Email	: simbgh80@yahoo.com
Contact	: +233 272114352
Enquiry	: Buyer is interested in importing PVC floorcoverings from India.

Name	: Benjamin Osei Tutu
Company	: Standard Logistics Solutions Company Limited
Address	: PO Box 112, Accra, Ghana
Email	: standardlogscoltd@gmail.com
Contact	: +233 244816344
Enquiry	: Buyer is interested in importing kitchenware items of plastics from India.

Name	: Michael Asare Asiedu
Company	: KS Tech Solutions Limited
Address	: PO Box 87, Akropong, Koforidua, Ghana
Email	: kstechsolutionsltd@gmail.com
Contact	: +233 544064797
Enquiry	: Buyer is interested in importing writing pens from India.

Name	: Bridget Prempeh
Company	: Freddy Bebeto Enterprise
Address	: PO Box 158, Adum, Kumasi, Ghana
Email	: freddybebetoent@gmail.com
Contact	: +233 242703943
Enquiry	: Buyer is interested in importing floorcoverings from India.

Name	: Evans Kusi Worae
Company	: Danlarico Technologies
Address	: PO Box 37, Fante New Town, Kumasi, Ghana
Email	: ekusiworae@gmail.com
Contact	: +233 24460286
Enquiry	: Buyer is interested in importing writing pens from India.

Name	: Rita Arko
Company	: Agerop Ghana Limited
Address	: PO Box 5840, Accra North, Accra, Ghana
Email	: bphase009@yahoo.com
Contact	: +233 540759122
Enquiry	: Buyer is interested in importing PVC pipes and floor coverings from India.

Name	: Joyce Oduro
Company	: Leystep Prestige Enterprise
Address	: Queens Gate Building, Prempeh II Street, Adum, OTB 163 PO Box KS. 7018 Ghana
Email	: leystepsenterprise@gmail.com
Contact	: +233 244129666
Enquiry	: Buyer is interested in importing combs, caps and closure of plastics from India.

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

The Plastics Export Promotion Council added the following companies/firms as new members during September 2019. We would like to welcome them aboard!

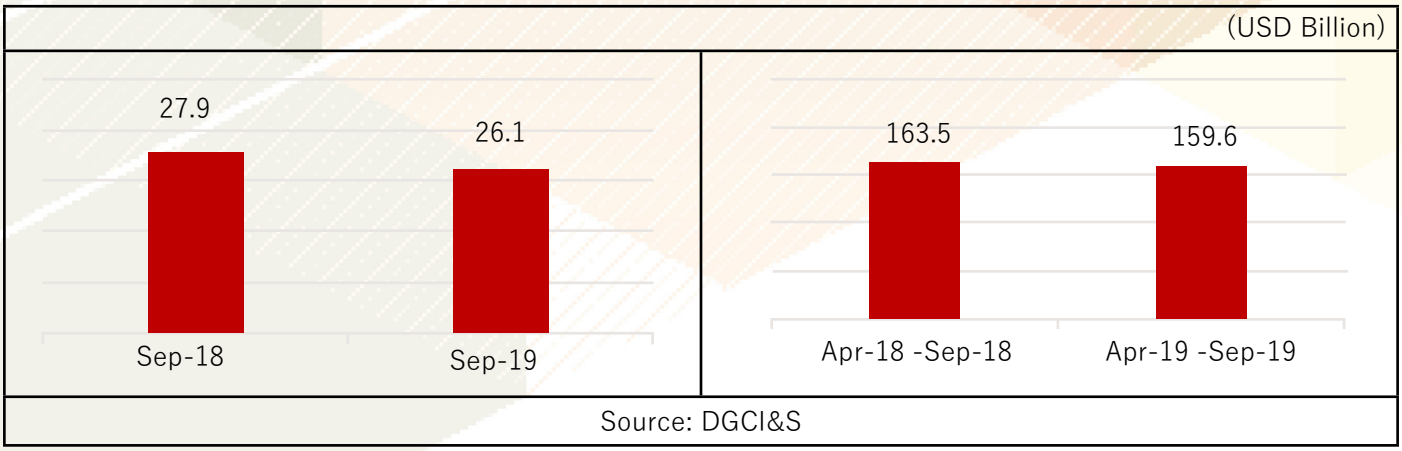
S. No.	Company Name	Communication Address	Director	Email
1	RMG FLEXIPACK LLP	"21-6-14 TO 48/3, GHANSI BAZAR, OPP. POST OFFICE, HIGH COURT ROAD,HYDERABAD, 500002TELENGANA.	SHUBHAM GUPTA	info@rmgflexi.com
2	VIEGA INDIA INNOVATIVE TECHNOLOGIES PRIVATE LIMITED	E-565, GIDC PHASE 2 , VILLAGE-RASOOLPURA, SANAND , AHMEDABAD, 382110 GUJARAT	SHRIYANS JAIN	Gambhir.Gupta@viega.in
3	BRAINCHAMBER POLYSACKS PRIVATE LIMITED	158, E WARD, KADAMWADI KOLHAPUR 416003 MAHARASHTRA	UDAYSINH S GHATAGE	hopbcpsaccounts@brainchamber.net
4	NORTH STREET COOLING TOWERS PVT. LTD.	C-14, MEERUT ROAD INDUSTRIAL AREA,SECTOR-22, GHAZIABAD -201003 UTTAR PRADESH	MUKESH BANSAL	rini@nsctpl.in
5	BHAVYA INDUSTRIES	9, RUCHI APPARTMENT, BEHIND JALARAM MANDIR, PALDI, AHMEDABAD 380006 GUJARAT	RINAL D SHAH	paras_traders123@yahoo.com
6	SIMAR OVERSEAS	"GROUND FLOOR, KH NO 89/3 AND 89/9, GHEVRA VILLAGE, NEW 110041 DELHI	SIMAR PAUL SINGH	harmeet128@yahoo.co.in
7	YUKAY HAIR EXIM	NO 5/3, KUPPIER STREET KONDITHOPE, CHENNAI600079 TAMIL NADU	K KARTHIK	yukayhairs@yahoo.com
8	SHARP COATING PRIVATE LIMITED	A4/1, PASCHIM VIHAR, 110063- DELHI	MAYANK GOEL	mayank.goel@sharpcoating.com
9	MVS ACMEI TECHNOLOGIES PRIVATE LIMITED	LEEVEN HEIGHTS - PLOT NO-31 SY NO.66 & 67- JUBLI ENCLAVE, MADHAPUR, HYDERABAD -500081 TELENGANA	MUDUNURI LALITHA	info@acmeirm.com
10	STALLION GLOBAL INDIA PVT LTD	"724-B SECTOR-8 CH ROAD BH ST. XAVIERS SCHOOL NR GANDHINAGAR SAMACHAR " GANDHINAGAR-382007GUJARAT	JAYESH R NIKAM	gspatil@stallionglobalindia.com
11	BOTHARA AGRO EQUIPMENTS PVT LTD	B-16 MIDC, AHMEDNAGAR-414111,MAHARASHTRA	SANTOSH M BOTHARA	bothara@bothara.com
12	JM PLASTOPACK	SURVEY NO 968, CHACHARWADI TEMPLE, PARIKH PACKAGING LANE, TALUKA SANAND, AHMEDABAD 382213 GUJARAT	ASHISH J TALATI	info@jmplastopack.com
13	AGAMYA PACKAGING SOLUTIONS PRIVATE LIMITED	NO 313, NAGAWALA VILLAGE, YELAWALA P.OMYSORE -571130 KARNATAKA	ASHWATHAMMA	enquiry@agamyaps.com
14	INDIAN HAIR FACTORY	4/187, NEAR THANGAM GARDEN, AVINASHILINGAM PALAYAM, PALANGARAI POST, TIRUPPUR 641654 TAMIL NADU	SARAVANAN R	rs@qplusindia.co.in
15	SPRINPAK MANUFACTURING LLP	D13A/7, 3RD FLOOR, MODEL TOWN 3RD, NEW DELHI 110009 DELHI	NIKHIL AGARWAL	nikhil@sprinpak.in
16	ESSENTIAL TRADEXPO PRIVATE LIMITED	D-34, INDUSTERIAL AREA BAHADRABAD, HARIDWAR-249402 UTTARAKHAND	ANKIT	ESSENTIALTRADEEXPO@GMAIL.COM
17	AEROLAM CLOSURES LLP	706, SHILP APERIA, NR. HOTEL LANDMARK, ISCON-AMBALI ROAD, BODAKDEV, AHMEDABAD-380054 GUJARAT	VAISHALI D PATEL	info@aerolam.com
18	OSPANA BATH FURNITURE LLP	SURVEY NO. 720 1P2, B/H. SONA SANITARY, LAKHADHIRPUR ROAD, VILLAGE-GHUNTU, MORBI, RAJKOT-363642 GUJARAT	GIRISHBHAI M SHIRVI	ospanaindia@gmail.com

Export Performance

TREND IN OVERALL EXPORTS

India reported merchandise exports of USD 26.1 billion in September 2019, down 6.4% from USD 27.9 billion in September 2018. Cumulative value of merchandise exports during April 2019 – September 2019 was USD 159.6 billion as against USD 163.5 billion during the same period last year, reflecting a decline of 2.4%.

Exhibit 1: Trend in overall merchandise exports from India

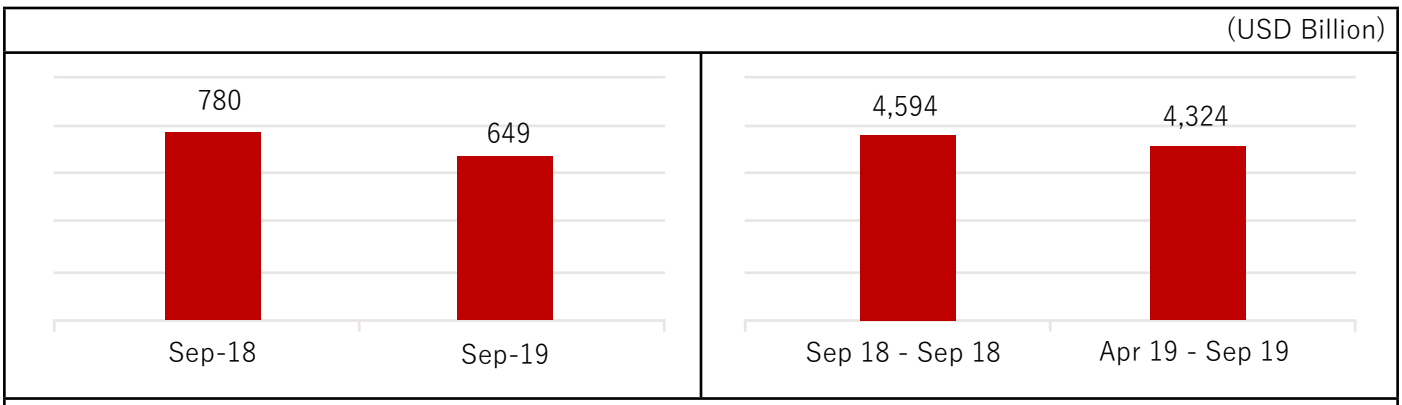


Source: DGCI&S

TREND IN PLASTICS EXPORT

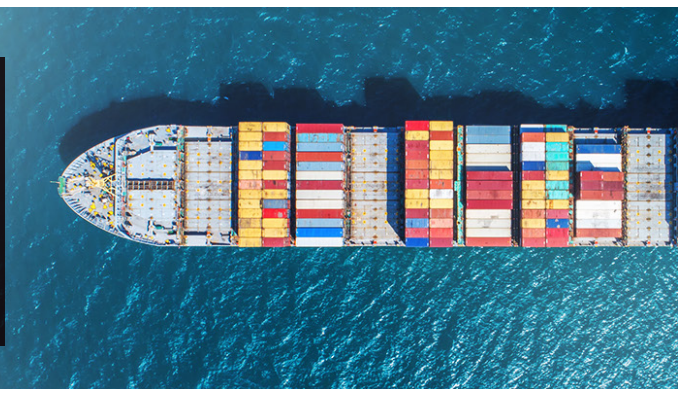
During September 2019, India exported plastics worth USD 649 million, down 16.8% from USD 780 million in September 2018. Cumulative value of plastics export during April 2019 – September 2019 was USD 4,324 million as against USD 4,594 million during the same period last year, registering a negative growth of 5.9%.

Exhibit 2: Trend in plastics export by India



Source: DGCI&S

- Plastics formed 2.71% of India's overall merchandise exports in April 2019 – September 2019
- India exported plastics to 209 countries in April 2019 – September 2019
- United States, China and United Arab Emirates were the top three buyers of plastics from India in April 2019 – September 2019



PLASTICS EXPORT, BY PANEL

In September 2019, plastic raw materials witnessed year-on-year decline of 33.0%; followed by optical items (-19.2%); stationery/office/school supply (-9.7%); and moulded & extruded goods (-8.2%). Product categories that reported positive growth include human hair products (+29.5%); other plastic items (+12.1%); plastic sheet, film, plates etc (+3.5%); and packaging materials (+2.7%).

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

Panel	Sep-18	Sep-19	Growth	Apr 18-Sep 18	Apr 19-Sep 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
Plastic raw materials	387.32	259.33	-33.0%	2,235.47	1,804.27	-19.3%
Plastic sheet, film, plates etc	116.89	120.93	3.5%	733.06	755.41	3.0%
Moulded & extruded goods	100.46	92.22	-8.2%	551.88	634.63	15.0%
Packaging materials	72.74	74.70	2.7%	418.85	426.30	1.8%
Optical items (incl. lens etc)	39.67	32.06	-19.2%	239.22	231.72	-3.1%
Other plastic items	28.60	32.07	12.1%	183.43	221.78	20.9%
Human hair, products thereof	16.74	21.67	29.5%	107.06	131.73	23.0%
Stationery/Office/School Supply	17.93	16.19	-9.7%	125.29	117.72	-6.0%
	780.35	649.17	-16.8%	4,594.26	4,323.55	-5.9%

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

PLASTICS EXPORT, BY REGION

India's plastics export in September 2019 was negative across all territories including, ASEAN + 2 (-34.0% year-on-year); Latin America & Caribbean (-30.1%); North-East Asia (-22.5%); Commonwealth of Independent States (-19.8%); European Union (-19.6%); Africa (-13.3%); South Asia (-11.4%); Middle East (-7.5%); and North America (-6.0%).

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

Region	Sep-18	Sep-19	Growth	Apr 18-Sep 18	Apr 19-Sep 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
European Union (EU)	152.36	122.53	-19.6%	918.40	847.68	-7.7%
North America	110.36	103.75	-6.0%	618.56	687.42	11.1%
Middle East	109.63	101.44	-7.5%	711.29	679.80	-4.4%
North-East Asia	128.81	99.83	-22.5%	658.33	651.40	-1.1%
Africa	88.53	76.79	-13.3%	569.19	525.03	-7.8%
South Asia	66.26	58.72	-11.4%	426.97	385.23	-9.8%
ASEAN + 2	71.95	47.48	-34.0%	368.62	298.23	-19.1%
Latin America & Caribbean (LAC)	38.69	27.03	-30.1%	254.05	179.20	-29.5%
CIS	10.71	8.59	-19.8%	46.23	54.20	17.2%
Others	3.05	3.01	-1.4%	22.61	15.37	-32.0%
	780.35	649.17	-16.8%	4,594.26	4,323.55	-5.9%

Source: DGCI&S

PLASTICS EXPORT, BY DESTINATION COUNTRY

During September 2019, five out of the top 25 destination countries recorded year-on-year growth in plastics export from India. Exports to Saudi Arabia witnessed a high growth rate of 24.5% during the period.

On a cumulative basis, during April 2019 – September 2019, seven out of the top 25 destination countries recorded year-on-year growth in plastics export from India. Exports to South Africa, Saudi Arabia and Canada, witnessed high growth rates ranging between 18-40%, during the above period.

Exhibit 5: Top 25 destinations of plastics exported by India

Country	Sep-18	Sep-19	Growth	Apr 18-Sep 18	Apr 19-Sep 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
China	109.88	83.87	-23.7%	537.78	532.69	-0.9%
United States	88.36	86.26	-2.4%	500.15	569.07	13.8%
United Arab Emirates	36.24	34.09	-5.9%	223.14	234.96	5.3%
Italy	26.80	20.01	-25.3%	187.52	144.77	-22.8%
Germany	27.78	25.47	-8.3%	162.54	153.47	-5.6%
Bangladesh	22.99	22.70	-1.3%	169.49	139.66	-17.6%
Turkey	16.40	18.64	13.7%	146.92	109.54	-25.4%
United Kingdom	23.04	19.55	-15.1%	128.28	134.38	4.8%
Nepal	21.05	22.03	4.6%	116.98	131.00	12.0%
Vietnam	22.85	8.39	-63.3%	105.45	68.94	-34.6%
France	16.21	9.96	-38.5%	92.03	89.09	-3.2%
Indonesia	18.38	9.71	-47.2%	87.36	50.89	-41.7%
Egypt	14.14	8.18	-42.1%	83.22	51.54	-38.1%
Belgium	10.48	7.60	-27.5%	66.80	58.36	-12.6%
Japan	10.79	8.84	-18.0%	68.11	55.74	-18.2%
Nigeria	11.98	10.28	-14.2%	82.79	56.44	-31.8%
Pakistan	8.59	1.01	-88.2%	61.58	41.08	-33.3%
South Africa	9.95	10.40	4.6%	56.43	77.48	37.3%
Israel	14.86	10.36	-30.3%	63.98	55.80	-12.8%
Mexico	12.39	7.90	-36.2%	66.50	56.83	-14.5%
Kenya	7.42	9.15	23.4%	65.32	64.83	-0.7%
Spain	11.92	7.86	-34.1%	62.23	56.10	-9.8%
Sri Lanka	11.12	8.72	-21.6%	58.70	49.51	-15.7%
Canada	9.61	9.59	-0.2%	51.91	61.52	18.5%
Saudi Arabia	8.02	9.98	24.5%	46.17	60.04	30.0%

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

India exported plastics to 186 countries in September 2019 as compared to 184 countries in September 2018.

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

Panel	Country	Apr 18-Sep 18 (USD Mn)	Apr 19-Sep 19 (USD Mn)	Growth (%)
Plastic raw materials	China	439.75	402.43	-8.5%
	Italy	133.28	85.35	-36.0%
	Turkey	125.44	94.40	-24.7%
	Bangladesh	121.46	91.96	-24.3%
	United Arab Emirates	106.40	86.41	-18.8%
	United States	87.56	71.49	-18.4%
	Vietnam	93.51	57.35	-38.7%
	Nepal	71.37	82.11	15.0%
	Indonesia	70.04	32.28	-53.9%
	Pakistan	56.77	37.84	-33.4%
Plastic sheet, film, plates etc	United States	114.78	136.77	19.2%
	United Arab Emirates	30.06	33.11	10.1%
	Germany	37.42	36.27	-3.1%
	South Africa	33.63	35.35	5.1%
	Nigeria	36.66	18.04	-50.8%
	Italy	25.58	24.62	-3.7%
	United Kingdom	23.67	28.16	19.0%
	Bangladesh	22.29	17.05	-23.5%
	Mexico	22.82	19.93	-12.7%
	Spain	18.44	19.69	6.8%
Moulded & extruded goods	United States	124.31	181.42	45.9%
	United Arab Emirates	33.78	51.56	52.6%
	United Kingdom	27.97	29.66	6.0%
	Germany	28.20	24.68	-12.5%
	Canada	23.28	31.01	33.2%
	Sri Lanka	12.52	6.48	-48.3%
	Spain	12.14	10.12	-16.7%
	Nigeria	9.72	10.05	3.3%
	Saudi Arabia	7.61	11.59	52.3%
	Brazil	9.02	12.46	38.1%
Packaging materials	United States	77.76	90.87	16.9%
	United Kingdom	35.74	32.59	-8.8%
	United Arab Emirates	21.50	24.95	16.0%
	Netherland	16.05	14.60	-9.1%
	Germany	12.92	10.40	-19.5%
	Belgium	11.76	4.78	-59.3%
	France	10.61	9.20	-13.3%
	Spain	9.02	9.07	0.6%
	Djibouti	8.41	8.19	-2.5%
	Nepal	8.13	7.19	-11.6%

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

Export Performance

Panel	Country	Apr 18-Sep 18 (USD Mn)	Apr 19-Sep 19 (USD Mn)	Growth (%)
Optical items (incl. lens etc)	France	57.41	61.21	6.6%
	Germany	25.86	24.29	-6.1%
	United Kingdom	20.35	20.94	2.9%
	United States	15.09	5.22	-65.4%
	United Arab Emirates	6.86	10.16	48.1%
	Netherland	10.56	11.94	13.1%
	Poland	9.61	10.23	6.4%
	Italy	4.85	11.67	140.5%
	Russia	4.83	5.77	19.5%
	Israel	3.84	4.67	21.6%
Other plastic items	United States	42.27	45.44	7.5%
	Belgium	18.29	12.77	-30.2%
	United Arab Emirates	15.57	21.02	35.0%
	South Africa	4.67	18.62	298.7%
	United Kingdom	4.74	8.72	84.0%
	Italy	6.25	7.87	25.9%
	Germany	5.93	8.24	39.0%
	Poland	3.66	4.43	21.2%
	Nepal	4.68	4.87	4.0%
	Saudi Arabia	4.15	4.81	15.7%
Human hair, products thereof	China	58.83	89.39	51.9%
	Myanmar	10.79	5.07	-53.0%
	United States	7.81	7.81	0.0%
	Tunisia	5.48	6.81	24.3%
	Hong Kong	4.28	6.16	43.7%
	Bangladesh	3.35	2.74	-18.4%
	United Arab Emirates	2.83	1.82	-35.6%
	Vietnam	1.41	2.14	51.8%
	Indonesia	1.90	1.10	-42.1%
	Italy	1.96	1.32	-32.8%
Stationery/Office/School Supply	United States	30.58	30.05	-1.7%
	United Arab Emirates	6.14	5.94	-3.3%
	United Kingdom	7.52	6.13	-18.5%
	Thailand	5.89	5.13	-12.8%
	Algeria	2.73	3.86	41.3%
	Bangladesh	2.80	3.39	20.8%
	Germany	2.94	2.68	-8.7%
	Mexico	2.59	1.77	-31.6%
	Latvia	2.73	1.44	-47.2%
	Nepal	2.88	2.56	-11.2%

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

ANNEXURE-I

Trend in overall exports by India

Month	2018-19	2019-20	Growth
	(USD Bn)	(USD Bn)	(%)
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%
August	27.87	26.13	-6.3%
September	27.90	26.11	-6.4%
	163.54	159.65	-2.4%

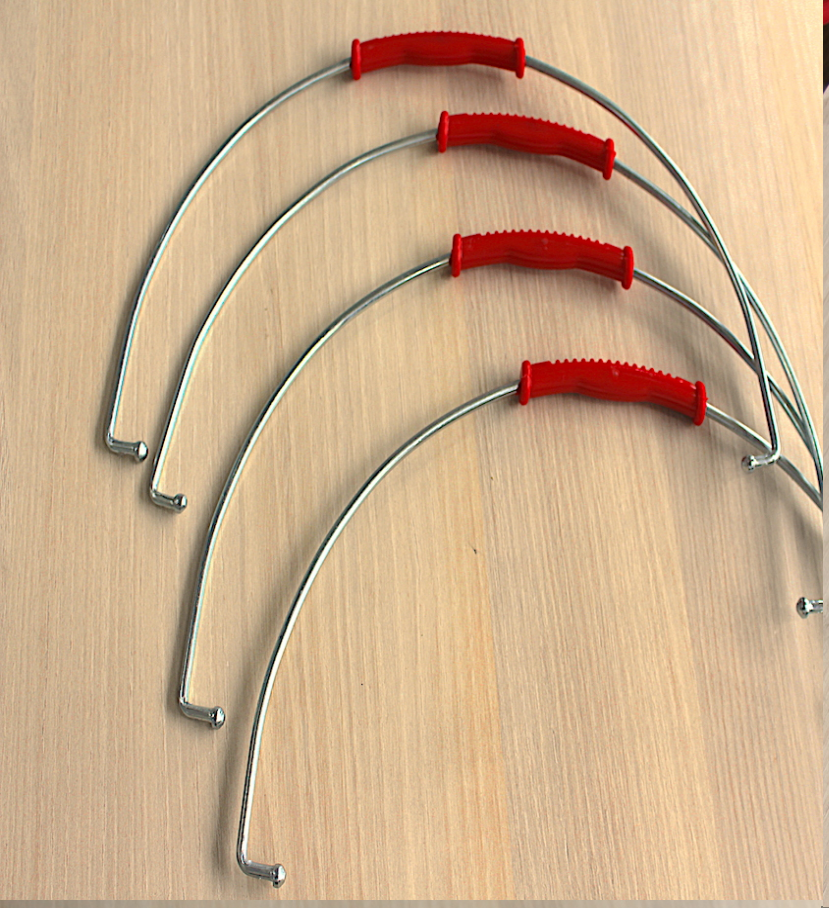
Source: DGCI&S

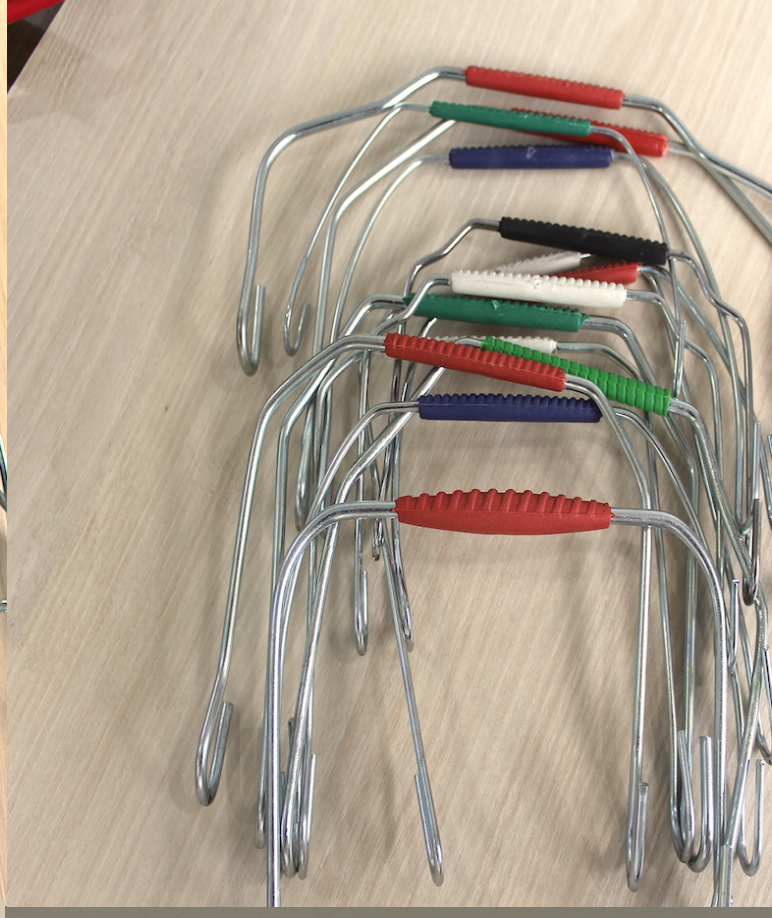
ANNEXURE-II

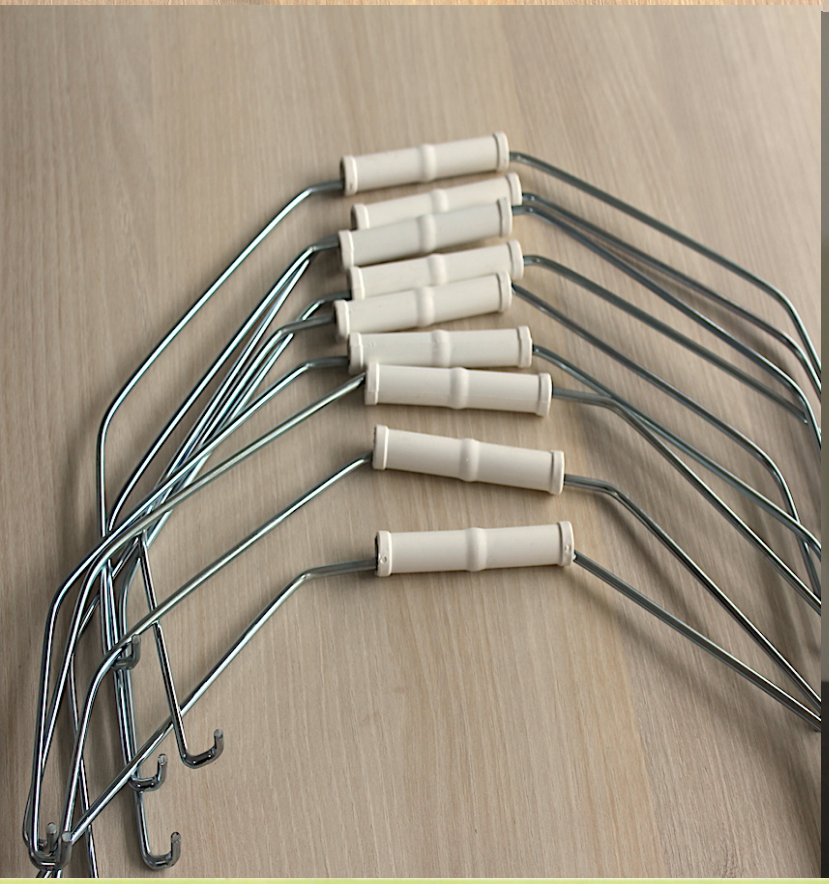
Trend in plastics export by India

Month	2018-19	2019-20	Growth
	(USD Mn)	(USD Mn)	(%)
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%
August	830.05	699.40	-15.7%
September	780.35	649.17	-16.8%
	4,594.26	4,323.55	-5.9%

Source: DGCI&S







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Ph. no. +91-11-40244718 Website: www.manglahandles.in

For Overseas Enquiries: E-mail: sapnamanglahandles@gmail.com mobile : +91-9899159578

For Domestic Enquiries: E-mail: manglashashi@gmail.com mobile : +91-9811593222