Vol. 07 I No. 04 I OCT - NOVE - 2020 I ₹ . 100/-

RNI No. GUJ/BIL/2014/61369

Page : 36

Plastic Tomorrow

Bi-Monthly Magazine, Bi-Language English & Gujarati Plastic Industry Periodical

PEP-CEE PACK INDUSTRIES

Pack ■ Protect ■ Mobilize ■ Enhance!

ISO 9001 - 2015 CERTIFIED

- Zero plastic waste production line.
- All products from Pep-Cee Pack Industries are 100% recyclable.
- Recycling through minimum impact.
- In-house recycling facility with capacity of 800MT per annum.

Manufacturer of all kinds of specialized and general purpose LDPE / LLDPE bags, rolls, sheets, wrapping & shrink films.

OFFICE:
C - 604 / 605, HETAL ARCH, S. V . ROAD, OPP. NATRAJ MARKET, MALAD (W), MUMBAI - 400 064. INDIA
FACTORY:
S.NO.261/2A, DOULATABAD, NEAR JALARAM TEMPLE, BHIMPORE, DAMAN (U.T)- 396 210.
TEL.: +91-22-4297 7444 / 400 , 2888 1944

stretch@pepceepack.com www.pepceepack.com facebook.com/pepceepack

Online Rotogravure Printing Machine

MSC
ROTO I FLEXO I LAMINATION I SLIT

Application:

- LD HM Liners
- Carry Bags & Shopping Bags
- Garbage Bags
- Compostable Bags
- PP Liners or Bags

Features:

Oscillating Doctor Blade Movement Facility

Drying Blower Facility

360° Universal Movement Oscillating Doctor Blade

Main Shaft Power Transmission Facility

Air Pneumatic Pressure Rubber Roller

Frequency Drive And Control Panel With CE Std Components Fitted

Technical Specificaton:

Model Name	Min. Print	Max. Print	Min. Print Repeat	Max. Print Repeat
OLP 16	150 mm	400 mm	250 mm	660 mm
OLP 22	250 mm	550 mm	250 mm	660 mm
OLP 28	250 mm	700 mm	250 mm	660 mm
OLP 32	300 mm	800 mm	250 mm	660 mm
OLP 42	380 mm	1060 mm	380 mm	760 mm
OLP 52	380 mm	1320 mm	380 mm	760 mm
OLP 62	500 mm	1570 mm	500 mm	880 mm

Online Mini Rotogravure Printing Unit

Application:

- Warning Signs
- Company Information
- Film Specification
- Product's Material Property Details
- Legal Informations

Features:

- Rotogravure Cylinder Based Concept
- Sharp Printing Quality
- Printing Facility Available On Any Left Or Right Corner Of The Film

MAA SHAKTI CORPORATION
984/G.I.D.C. Makarpura, Vadodara-390010.
+91 99798 40772 / 98249 41117
sales@shaktiroto.com / olp7545@gmail.com
www.shaktiroto.com

Sahkar Industries

Manufacturer & Exporter of : Plastic Processing Machines

MAKE IN INDIA

EXPORTED TO AFRICA & USA

15 T to 600 Tonnes Horizontal Injection Moulding Machine

8 to 100 Tonnes Clamping Capacity
Insert Moulding Machine
(Vertical Clamping - Vertical Injection)

30 to 100 Tonnes Clamping Capacity
Insert Moulding Machine
(Vertical Clamping - Horizontal Injection)

● Machine Driven with Fixed Pump ● Variable Pump ● Servo Drive System

989/16/1 B, G.I.D.C., Makarpura Industrial Estate Baroda - 390 010 Gujarat (INDIA)
Mobile No. +91-98244 20109, +91-9898866795
Email : sahkar@sahkarindustries.com, sahkarindustries@gmail.com www.sahkarindustries.com

Publisher & Chief Editor:
Dinesh j Shah

Marketing Team:
Bharat Vaishnav
Bharat Shah
B V Shah
V K Mehta

Design By:
C J Graphics

Published & Printed By:
D J Publication
Dinesh Shah
303 - Sunsilk Apartment,
B/H. Dinesh Mill, Patel Colony,
Nr. Verai Mataji Temple,
Vadodara - 390 007. Gujarat, India

Contact:
+91 9327 344 559 | 9426 334 455

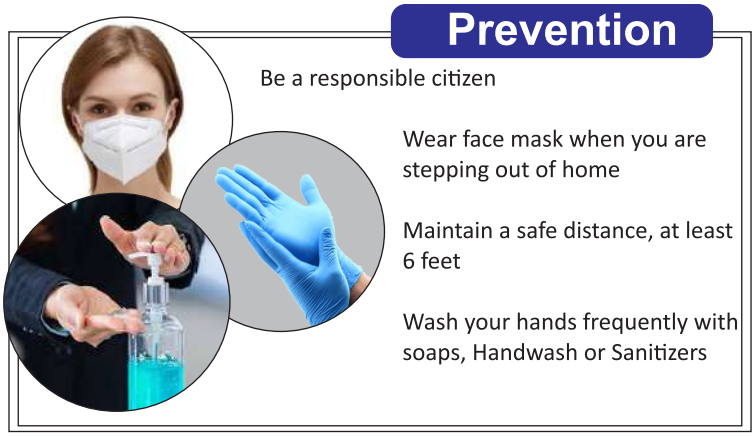
Mail:
plasticudyog@gmail.com
plastictomorrow@gmail.com

Publisher & Printed By:
Dinesh j Shah

CONTENTS

BUSINESS NEWS

ADVERTISEMENT INDEX



Millad® NX® 8000 ECO for PP certified by RecyClass for plastic packaging recycling in Europe

Ghent, Belgium – Millad® NX® 8000 technology is fully compatible with polypropylene (PP) recycling processes in Europe and poses no recyclability issues, according to RecyClass, a cross-industry initiative that works to advance plastic packaging recyclability on the continent.

RecyClass approval applies to the technology itself, while the packaging using the technology must adhere to certain conditions[1] to be considered fully compatible with the PP recycling stream. These include the maximum content of the technology of 0,4% compared to the overall packaging weight

Testing was conducted by Plastics Forming Enterprise, in accordance with the APR PP Critical and Application Guidance protocol[2]. Recyclates generated via recycling of packaging containing this clarifying agent can be used in high-quality applications. In this protocol a concentration limit of 50% is tested.

Millad NX 8000, including its variants Millad NX 8000E, for PP blow molding applications, and Millad NX 8000 ECO, a sustainable clarifying agent for PP, is used by more resin producers than any other, making it the number one clarifier for PP in the world.

Millad NX 8000 not only transforms polypropylene into a crystal clear alternative to glass, PET, PVC and PC, but boosts sustainability. Compared to previous generation clarifier technologies, it offers faster production rates and average energy savings of 10% in the production of injection molded clarified polypropylene parts. As a result, converters and brand owners can use the UL Environmental Claim Validation label to highlight the energy consumption reductions achieved with its use in a transparent PP product.

In addition to these market leading benefits, Millad NX 8000 ECO addresses concerns

related to migration, especially in food contact applications, by reducing Specific Migration Limits, or SMLs, without adding any new ingredients to the formulation. Millad NX 8000 ECO also maintains a consistent, fresh appearance in all retail lighting, regardless of the presence of UV light from the light source.

Just last year, Millad NX 8000 clarifier received Critical Guidance Recognition from the Association of Plastic Recyclers (APR), validating that the additive is compatible with plastic packaging recycling. This latest certification further demonstrates that Millad NX 8000 technology promotes the increased recyclability of packaging. The technology's compatibility with recycling is another step closer to the establishment of a genuine circular economy for plastic packaging.

For More Details :
www.milliken.com

Courtesy


CREATE A CULTURE OF
CONSCIOUS
PLASTIC
PRACTICES
By Promoting Powerful Opportunities of Recycling and Upcycling within the plasting Industry
Let's vote for an industry change. And promise today to save our planet by simply becoming responsible towards the concept of Recycling and Reuse.
Let plastics be the way environment flourishes.
Powered by
PMMAI
PLASTFOCUS
5 - 9 MARCH 2022
India Expo Centre, Greater Noida, Delhi NCR
Organized by
TRIUNE EXHIBITORS PVT LTD
+91 98450 89641 | info@plastfocus.org | www.plastfocus.org

Mondi shines by winning two awards for sustainable food packaging

- **Two products developed using Mondi's EcoSolutions approach have been recognised:**

> PerFORMing, a paper-based packaging with patented barrier for cheese slices, developed for Austrian retailer REWE

> A fully recyclable, mono-material thermoforming film for Austrian meat producer Hütthaler's meat and sausage prodcts

> Mondi's EcoSolutions approach focuses on developing products for customers using paper where possible and plastic when useful

Mondi, a leading global packaging and paper manufacturer, has been recognised in this year's Austrian Green Star Packaging Awards for two recent sustainable packaging innovations developed using its

customer-centricapproach, EcoSolutions:

PerFORMing - paper-based packaging with special barrier coating to protect cheese slicesAustria's biggest retailer REWE worked together with Mondi to launch a more sustainable cheese tray for their organic brand Ja! Natürlich. Mondi developed a special kraft paper, Advantage Formable Brown, to replace rigid plastic trays. Its unique stretch characteristics mean it can be formed into a shallow tray enhanced with aspecial barrier coating.

This PerFORMing technology combines 80% paper, a renewable and recyclable raw material, with a 20% barrier coating. "The adoption of this package allowed REWE to reduce the amount of plastic used by

70% and the carbon footprint by two-thirds," said Marko Schuster, COO of Mondi Functional Paper & Films.

Fully recyclable thermoforming plastic film for meat

Mondi was able to reinvent packaging for Austrian meat producer Hütthaler.

The packaging was designed for recycling while maintaining optimum barrier properties and replacing a previous, less sustainable, packaging.

"Together with Hütthaler, we developed a mono-material film solution for the rmoforming applications that can be fully recycled, and still provides a barrier to protect food. The new film meets high food standards, preserves shelf life and also helps Hütthaler to save on disposal fees due to its recyclability," said Andreas Koppitz, COO of Mondi's Consumer Flexibles business.

Schuster and Koppitz, on behalf of their teams, expressed how proud they are to win these awards. Both products underscore Mondi's commitment to developing sustainable solutions that contribute to a better world.

Read more about Per FORMing here:"Mondi's sustainable paper-based packaging solution for ood trays"

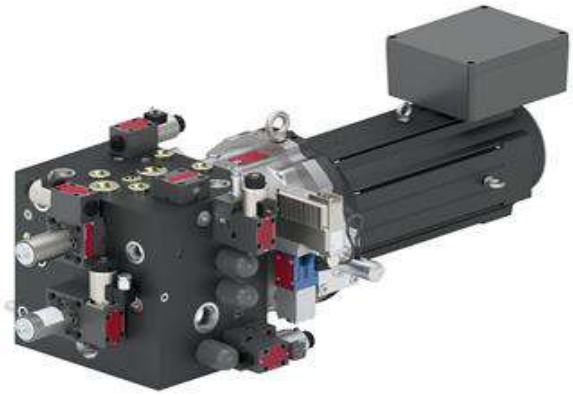
Read more about the fully recyclable thermoforming plastic film here: "Mondi partners with meat producer Hütthaler to create new fully recyclable plastic packaging"

For more details
www.mondigroup.com

Courtesy

The New Moog Modular Electrohydrostatic Actuation System (EAS) Combines the Best of Two Worlds: Electrohydraulic (EH) and Electromechanical (EM) Actuation.

Moog Industrial Group, a division of Moog Inc., (NYSE: MOG.A and MOG.B) today announced the market introduction of the new Modular EAS System. The Modular EAS is a highly flexible system with excellent scalability and variability and can be easily adapted to most types of industrial manufacturing machinery.



Standardized Modular EAS Solution

The Moog Modular Electrohydrostatic Actuation System (Modular EAS) features standardized modules with a wide number of customization options available. This process allows for extensive application potential by meeting the specific requirements of the customer. The system's smallest scope of delivery consists of a basic manifold and an Electrohydrostatic Pump Unit (EPU) which Moog delivers as an assembled and tested unit.

To expand the system, the basic module can be combined with various options or adapted with additional standardized high-speed manifolds in order to build a complete motion control system. With the Modular EAS System the localized power allows for improved energy efficiency due to the elimination of the flow control valving and centralized piping, which reduces the amount of wasted energy commonly found on traditional hydraulic systems.

Modular EAS Benefits

- High force capability and force density that provide a compact and performant alternative to EH and EM actuation
- Environmentally clean due to up to 90% lower oil requirement compared to the standard systems and low noise emission for quiet machine operation
- Small number of components to reduce the risk of breakdown and allow for faster maintenance
- Decentralized system that eliminates the need for a large Hydraulic Power Unit (HPU) and reduces piping
- 4-quadrant operation technology allows for universal suitability for a large range of challenging applications as well as for effective energy management with reduced consumption due to energy recuperation
- Low mass inertia of the EPU provides high system dynamics

Applications

The Modular EAS System is suitable for a wide range of industrial manufacturing machinery. It can be used on metal pressing applications from forging, powder and sheet metal presses to hot forming, punching and isostatic press machines. In wood and paper milling, testing and power generation applications the Modular EAS System allows for improved decentralization of the machine axes. Additional high-performance applications can be realised in the industrial marine sector, on operational mobile machinery and on injection and blow molding machinery in the plastics sector. The system simultaneously reduces oil requirements for HPU by 90%, thereby reducing machine cost of ownership significantly

For More details
www.moog.com

Courtesy

Innovative new technology from Mitsubishi Engineering-Plastics Corporation helps reduce emission footprints

Mitsubishi Engineering-Plastics Corporation (MEP), the global leader in high performance polyacetal materials, meets the rapidly-changing stringent regulatory and functional requirements of the automotive, electronics and general industries markets for low formaldehyde emissions with a new polyacetal (POM) product family. MEP announces the innovative low-odor and low-residue lupital™ 05 Polyacetal Series.

Traditional industrial polyacetal offerings can give

off undesired gaseous formaldehyde products during processing, which hampers its adoption in low emission driven industries, including automotive applications, electronics and general industry.

This best-in-class formulation allows the popular lupital™ product line to significantly reduce the production of formaldehyde while maintaining excellent chemical, thermal, electrical, and mechanical properties with exceptional wear resistance.

By optimizing manufacturing technology through proprietary R&D efforts, the MEP engineering team has succeeded in reducing the amount of formaldehyde typically generated by about 50%. This innovation optimizes injection molding production due to less mold deposit, reduces downtime for cleaning molds as well as extending the life of the mold, resulting in lower operating costs. Additionally, the lupital™ 05 Series significantly emits less formaldehyde odors during molding, thus improving the working conditions

MEP will introduce this new generation of innovative polyacetals with a range of different viscosities, including the standard flow version F20-05 and the high flow grades F30-05 and F40-05.

According to Kazuhiro Ando, Executive Officer of MEP Japan, the key driver in MEP's new developments are matching industry needs raised by customers, through the provision of value added products and services, whilst contributing to our natural environment. "With this new manufacturing innovation, we are confident MEP can not only successfully extend the already widely adopted lupital™ portfolio by providing a sought after solution for

emission reduction to industry, but also contribute positively to society by offering products with a further improved environmental footprint"

For More Details:
www.m-ep.co.jp/en

Courtesy

INNOVATIVE ELECTRIC RACE CAR PART SHOWS POTENTIAL FOR ELECTRON BEAM MELTING IN AUTOMOTIVE

Uk's National Centre for Additive Manufacturing supports Formula Student raceteam'selectrification ambitions

The Manufacturing Technology Centre (MTC), part of the High Value Manufacturing Catapult, supported by Innovate UK, is focused in accelerating the UK's industrial growth, developing and proving innovative manufacturing processes and technologies together with creating and embedding future skills.

Driving the commercialization of additive across the UK's manufacturing sector

Accelerating the adoption of additive manufacturing is a specific focus for the National Centre for Additive Manufacturing Centre (NCAM), part of the MTC. NCAM works with a growing ecosystem of member partners, companies of all sizes and research institutes to challenge the boundaries of additive manufacturing regionally and nationally.

For the past three years, the NCAM's DRAMA research project has helped build a stronger additive supply chain for the UK's aerospace sector – an industry which has the largest number of small and medium sized enterprise (SME) companies in Europe.

The automotive sector and motorsports have also been the lifeblood of manufacturing in the West Midlands - one of the UK's industrial heartlands. For generations the region has been the crux of invention, technology and innovation that has defined motoring and mobility globally.

So, it's fitting that the NCAM's Coventry-based team has been using additive technology to continue that innovation legacy and pushing the boundaries of automotive engineering with one of the UK's leading formula student racing teams.

Electron Beams meets Electrification

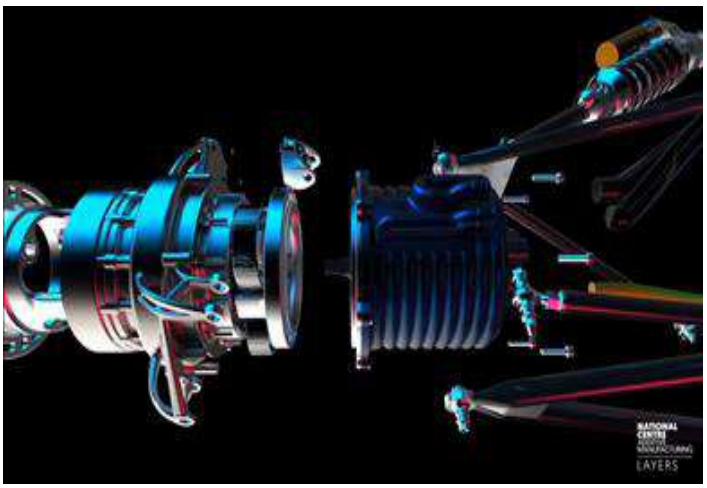
Over the past three years, the MTC has been working with Oxford Brookes Racing (OBR), the formula student racing team at Oxford Brookes University, on various projects. After a long and successful history of combustion entries in the hotly contested formula student competition, OBR was keen to make the shift to all-electric for the 2020 season.

Once again, the OBR team turned to NCAM to explore the potential of additively manufacturing a complex and critical part that connects the suspension link, the brake mounts, the wheel, as well as housing the gearbox to the race car's electric motor.

The part is based around a 4WD in-hub motor configuration with AMK AC servo motors mated to a compact epicyclic gearbox capable of producing over 300 N-m of torque at each wheel. Energy is supplied from a 600V, 6.6 kW-hr battery pack using lithium cobalt oxide (LCO) pouch cells with a peak output of over 130 kW. All to be managed through an open controls platform, ideal for implementing torque vectoring and advanced vehicle controls to unleash the full performance potential of an electric race car.

"Our team was aiming not only to develop a platform to take on the other top Formula Student teams in the world, but to also serve as a test bed for innovation in electric vehicles and controls software. It has also given us an opportunity to be on the forefront of not only performance, but also the industry by gaining both the knowledge and hands-on experience working with electric vehicles," comments Charles Boileve at Oxford Brookes Racing.

"We're here to help wherever we can. In fact, the OBR team already had a strong concept and design for additive in mind, which was about 90% there. Our team was able to add our deep additive expertise, offer



guidance and add that remaining 10% in order to get the project up and running," says Ruaridh Mitchinson, product development leader at NCAM."

"The collaboration case study project enabled demonstration of the full AM end to-manufacturing process; from a conception idea to design for AM, manufacture, inspection and post processing machining. The most exciting thing was working closely with MTC Design for Additive and process engineering experts to fully explore the EBM AM process capability, as well as disseminating the knowledge to Oxford Brookes racing team," adds Mitchinson.

Core to the NCAM team's expertise is identifying and tailoring the most appropriate technology for a specific application. In the case of the OBR part, electron beam melting (EBM) and a GE Additive Arcam EBM Q20plus were selected from a wide selection of technology at the center's disposal. Once EBM was selected as the most appropriate, Emmanuel Muzangaza a senior research engineer at NCAM, worked closely with the OBR team on its part.

EBM systems create dimensionally accurate parts quickly and efficiently by utilizing a high-power electron beam. The process takes place in vacuum and at high temperatures, resulting in stress-relieved components with material properties better than cast and comparable to wrought material.

Some of the factors leading to the choice of selecting EBM over other additive technologies for the OBR project included:

- Design freedom that allows for dense nesting of entire build tank and large, bulky parts without swelling and the ability to easily create little to no supports on parts at low costs
- High process temperatures mean that parts can be produced with no or minimal residual stress
- Cost-Effectiveness. EBM enables the use of reactive and crack-prone materials such as Ti-6Al-4V at low costs and the possibility to reuse powder extracted from the system's Powder Recovery Station (PRS).

2020 Season's Red Flag

COVID-19 put paid to the FSUK 2020 season. However earlier in the year, over 80 teams from across the UK still participated in a virtual competition. The OBR20 team placed fifth overall in the Statics category and third overall in Virtual Dynamics category, which had they been scored together - as is done at the real-world event - the team would have placed second overall, and runners up for the third year in a row.

"While we hit a bump in the road this year, we continued to better ourselves as engineers - by pushing ahead and looking forward. The electric revolution is still coming, so we will be striving for perfection as a team, and remain committed to our vision of building a multi-year legacy," adds Boileve

For More Details :
www.ge.com/additive

Courtesy

EXHIBITION DETAIL

EXHIBITION	COUNTRY	DATE
PLAST ASIA 2020	BIEC - BANGALORE	2 -5 JULY 2021
PLAST INDIA-2021	PRAGATI MAIDAN-NEW DELHI	17-21 FEB 2022
PLAST FOCUS	GREATER NOIDA	5-9 MARCH 2022

ગામદોડ, ત્યાંનાદોડો. જુદીદિશાપકડો.

આખું ગામ અત્યારેફક્તપીવીસીફ્રોમ્ડબોર્ડબનાવવા માટે,છાશવારે ચાઇનાદોડી જાય છે.પ્લાયવૂડની કેટલી માંગ છે એ કોઇને ખબર છે? એની સામે આપીવીસીબોર્ડવેચવાના છે.

નોન-વોવનબનાવવા માટે મશીનલઇઆવનારાનીશીદશા થઇ એ ગામ આખુંભૂલીગયું છે.

મોટાંકીભાંડો લોકોભૂલી જાય છે,એટલે આ વાત બહુસામાન્ય છે.

પણ હરેકયુગમાંદરેકવાતનુંપુનરાવર્તન થયાંકરે છે.એટલે હવે, નોન-વોવન પછી પીવીસીફ્રોમ્ડબોર્ડ નો વારો છે.

લોભીયા હોય ત્યાં ધૂતારા ભૂખેનામરે. એટલે છાશવારે, બેગ ભરીનેચાઇના ઉપડીજતી પ્રજાને લાલબત્તીબતાવવાનો આ પ્રયત્નસમજવો.ચાઇના, આપણાજેવાસસ્તંખરીદનારાલોભીયાંની રાહ જોઇને, જાળ પાથરીને રાહ જુએ છે. આપણીલગભગ અભણ અનેકહેવાતી ભોળી પ્રજા ને એરપોર્ટથી લાવે, લઇ જાય, મસાજકરાવી દે, હોટલેથી લાવવા-લઇ જવાનીસગવડઆપે એટલે આપણી પ્રજા ભરાય.

ત્યાં જઇને, આપણને, પરોપજીવીવેલોનીજેમ,મફતમાં ખાવા-પીવાથી લઇને, ફરવા-ફરવાં સુધીનું મળી જાય એટલે આપણા બાપ જન્મારેયકોઇ જાણકારીનહિહોવાં છતાંયે, જે મળે એ ઉચકીલાવવુંએવીઆપણીબાલીશહરકતોનો, ચીનાઓ લાભ ઉઠાવે છે, અને એ આપણને ભાન પડેત્યાં સુધી ઘણું મોડું થઇ ચૂક્યું હોય છે.

સુધરી જાવ, આપનાપિતાજી એ બહુમેહનતકરીનેરુપિયાભેગાંકર્યાંહશે. આલેખ, ગુજરાતીમાંહોવાનુંકારણ ચોક્કસ છે.

જયહિંદ.

The Author, Mr.Kamal Shah, is Ahmedabad based consultant, assisting to set up Lucrative and new projects.

mail@positiveaggression.in9624112091 / 9879552875

SAMEERJOSHI, PHD
joshisameera@gmail.com

Environment, Climate Change and Atmanirbhar Bharat

The Way Forward

The year 2020 has been one that has set everyone thinking and acting like neverbefore. Nothing seems to have changed, yet everything has changed suddenly. The term of the year is 'NEW NORMAL' and it has affected everyone like neverbefore. Albert Einstein had once said, "The environment iseverything that isn't me." How true he was and is but when we think of 2020, suddenly everything changed.

Green Jobs and Rebooting Energy Mix

Energy expenditures for the large energyconsuming countries havebeensignificantly reduced due to the collapse of oil prices. For example, every $4decrease in the commodity prices leads to about $5 billion in import bill savings forIndia which is the world's third-largest energy consumer.India can now use thesesavings to reinvest in a more diversified renewable energy and lowcarbon transport system such as electric mobility.

Regulated Use of Plastics

The arrival of the Covid-19 pandemic has increased the dependence on plastic based healthcare equipment and protection kits as these are the need of the hour. Properdisposalof bio-medicalwaste is already a norm being enforced effectively bythe government. Authorities have taken concrete initiatives in curbing plasticmanufacturing and engorged recycling material thorough variousregulations.

It is time new material research with less toxicity level to environment is promoted under the government policies.

The plastics industry, by its history, versatility and capacity to innovate, already plays a crucial role in supporting sustainability and the circular economy concept in various sectors. Some of the most important contributions are in the transport, construction and food industries. Light weight vehicles make the transport sector more fuel efficient (every 10% of weight reduced in vehicles enhances lifetime fuel efficiency by 6-8%) and reduce greenhouse gas emissions by about 30%. At the same time, high performance and long-lasting insulation products help save energy in the construction sector and plastic packaging ensures food safety and reduces food waste (for e.g., bananas wrapped in plastic packaging have a longer life by 21 days).

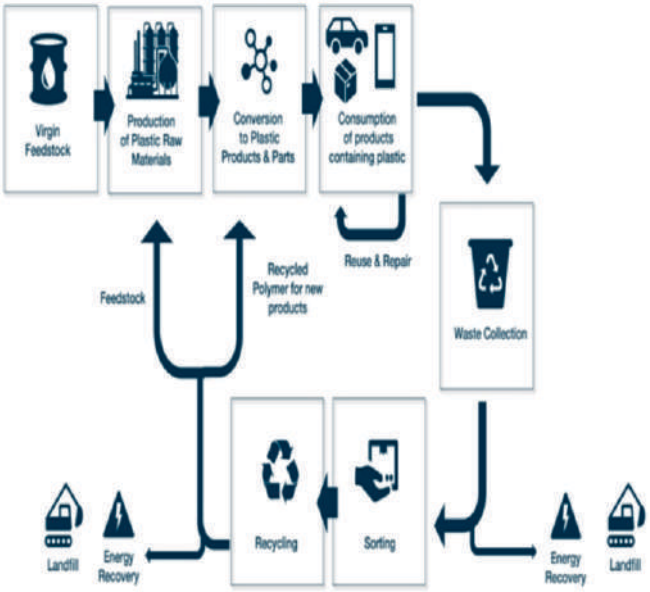
Innovation in product design for reusability, recyclability, and recovery

- Favourable regulations and standards for environmental benefits and sustainable growth
- Skills upgrade and digitalization
- Efficient waste management and infrastructure
- Agile and efficient supply chains
- Establishment and regulation of market for secondary raw materials
- Collaboration across and integration of value chains
- Education and awareness among key stakeholders

Supporting the growth and sustainable development of the industry will help create awareness and showcase the opportunities within the circular economy to extract greater value and maximize the use of products and applications once they reach their end of intended purpose.

Government programs on plasticreduction that are based on a circular economy with 'extended polluters' responsibility' principle and new sustainable materials could lose ground if they aren't tied tothe core purpose of

a business on verge of economic recovery. Recycling andwaste management industries are already under stress, though in some cases supplybottlenecks could push the companies to explore new materials. The recent economicstimulus given to micro small and medium enterprises must also have the focus on recycling andup scaling of product digitization of waste management industry besides the use of artificial intelligence (AI). AI will play an important role in waste management to improvethe quality of the systems in the days to come.



Technology plays an important role in wastemanagement today. This is because progressive digitization is helping substantially optimize waste collection processes and recycling activities. Anexample of this is the manner in which digitization has worked its way into all the areas ofindustrialized life. One can see how it is now hard to imagine life at work or at homewithout smartphones. Many industrial applications are already operating digitallyand in networks. The cloud plays an important role in this, as it enables data,resources and applications to be used while being more connected than ever before. All this provides opportunities for companies to become successful on a global scale.

The waste disposal industry, for instance, is facing major challenges all around theworld. Due to increasing industrialization worldwide, globalization of tradeand associated rise in wealth, more waste is being generated today than everbefore. Shrinking packaging sizes, increasingly complex packaging, and particularlyfunctional composite packaging are all significant factors to understand. As a result, the work ofdisposal companies is becoming increasingly extensive, complicated andexpensive.

At the same time, the competition between the waste disposal companies is due to the wastehierarchy which was established many years ago and is now being rigorously put intopractice. A circular economy has already become a reality in many areas. In anincreasingly networked industry, this means that any disposal which may benecessary at a later date needs to be taken into account in the initial design andthen carried out accordingly.

Producers of plastic packaging are also involved with their commitment topreventing the disposal of plastic waste in the sea. Industries such as metal, glassor paper production which already collect and recycle valuable materials tocontrol and ensure their own supply of raw materials are also affected.

The digitized world of work enables companies and public authorities within thisenvironment to provide increasingly better services for their customers andsociety. India has seen many start ups in the waste management system. There areyoung entrepreneurs who take help of technology to manage the waste andsystems. Better logistics of the vehicles for picking up the waste and task backprograms are in place now. One such example is that of a company calledRecykal.com that is bringing digital revolution to the waste management andrecycling while creating transparent and traceable loops for materials. Youngentrepreneurs are up scaling the end of life products and making bricks from multilayerfilm packets.

Some of the global companies like Gemini Incorporated are creating microentrepreneurs by formalizing the small 'kabadiwalas' by giving them balingmachines, finance and buying the sorted and baled materials. GDB Internationalfrom USA that is working with USA Plastic Associations and the government there to increase recycled content in certain products so as to encourage therecycling industry is another such example.

Shakti Plastic Industries, a well known name in the Indian plastic recycling, is encouraging and supporting young entrepreneurs to come up with upscaleproducts while mentoring them.

The company Lucro.in has an aim topopularize the recycling culture. Its Plast-e-Cycle addresses three core areas - protecting the environment byreducing plastic waste reaching landfills and oceans, developing the communityby creating opportunities for rag pickers and dormant factories and progressingbusinesses by manufacturing innovative and environmentfriendly products.
It is time for collaboration and work for the circular economy andnot competition as the issues of environment andclimate change have become far more serious as we move ahead. Though there are many hurdles, the plastic waste management industry is maturing. The efforts of the government in creating favorable policies and guidelines, initiatives by NitiAayog, MSME interventions, initiatives by the people, designers, big brand owners, NGOs,technology experts are laudable. With such collaborations India can surely Atmanirbhar (self reliant) in plastic waste management. Resources are limited, but the efforts needed are unlimited

Climate change is getting attention as never before and the efforts in dealing with the same also has increased and the commitment for a better future depends on our actions today , so that our future generations can lay claim to a better tomorrow more exciting and brilliant then our past……

Sameer Joshi, has done his Ph.D. in plastic waste management, and is a Guinness book world record holder for the world's largest T-shirt from plastic waste in 2018. He works in the field of plastic recycling and circular economy

Dr. Sameer Joshi, Ph.D.

Sanat N. Shah
Plastic Project & Recycling Consultant
+91-9825055314 I sanat.1957@gmail.com

Avoid Common Mold Set-Up Mistakes

Every molding machine has to shut down periodically for a mold set-up.

Unfortunately, machines are commonly out of action far longer than necessary due to avoidable mistakes in set-up procedures. A poorly planned or executed mold set-up can resemble a comedy of errors.

When the machine is started up again, the result can be slow cycles, high scrap rates, tool damage, defective parts, rework, an unstable process, late delivery of product, and the loss of profit margin on the job.

Manufacturing unit can embraced the challenge of perfecting the mold changeover process rather than just accepting it as a necessary task. Along the way, experts have acquired some insight on avoiding common mistakes. Getting change-over right is particularly important to focus on short-run manufacturing.

Right approach works: Mold- change times can be trimmed by 50% over the years, and one will able to complete many change over for smaller presses in less than 30-60 min and for largest presses within 2-4 hr.

TIP NO. 1
AVOID UNNECESSARY IDLING

At many molders, once the press completes its last cycle, it typically is shut down and sits idle while the changeover crew takes out the finished mold and puts it away, locates and retrieves the next mold, stages any required auxiliary equipment, and finally conducts the set-up.

We recommend pre-staging the next mold changeover while the press is still in production with the current mold. Use a set-up cart that contains all of the tools necessary to tear down and set up the mold. The cart should include wrenches, mold clamps and bolts, nozzles, cleaners, and any other equipment required.

A member of the crew should go over the set-up cart during the pre-staging effort to ensure it isn't missing any essential items. Pre-staging helps shave as much as 33% off the average changeover time.

Scheduling and staging material in time is also critical. Many materials require pre-drying from 2 to 6 hr before processing. Failure to adequately schedule and pre-stage the material has the potential to idle a press much longer than the rest of the changeover activities combined.

Prioritize the set-up crew's activities: Concentrate on getting the new mold up and running first, not on putting the just-removed mold into storage. There's time for that after the changeover is complete and production resumes.

TIP NO. 2
ORGANIZE MOLD STORAGE

A trouble spot for many molders is mold storage. They often waste time finding and retrieving molds. Part of the problem is inefficient ways of storing and inventorying molds. Another part of the problem is storing molds too far away from the press. To improve mold storage and retrieval, We can built what we call mold grandstands and are located adjacent to the press. Every mold is assigned a place on a specific rack, and each mold is numbered. The most frequently run molds are stored where they are easiest to reach. So, when a mold is needed, one of the crew performing the changeover needs only to walk across the aisle to retrieve the mold. An overhead crane is used to transport the molds. We have separate grandstands for small and medium-size molds, while the larger

molds are stored on a vertical racking system near the large injection machines.

TIP NO. 3
FOLLOW A CHECKLIST

In the absence of a defined process for changeovers, molders may face long start-ups and other challenges that adversely affect market competitiveness. Establishing a checklist for the tools and steps for mold connection to the press is vital. Production supervisors can use the checklist to make sure each scheduled changeover was completed and to evaluate how well it was done. One has to analyze every changeover and looks for ways to improve the process. Even non-machine-related factors, such as material drying, can be reviewed closely for areas of improvement.

In fact, one can go so far as to create an instruction manual for each of the molds run. It includes checking the first and last parts in a job run for signs of warpage, flashing, mold wear, and other process maladies. One can also have a checklist for the auxiliary equipment used, which is a part of the work order.

TIP NO. 4
COMMIT TO TRAINING

Sometimes mold set-ups are protracted simply because there are too few people in the shop qualified to execute a mold changeover. In even a small molding shop, it is not uncommon to have several machines due for mold set-ups at the same time. Yet many molders rely on just one or two specialists. That means presses may remain idle while specialists are bogged down during busy periods or difficult set-ups.

This can be avoided by training machine operators to do mold changeovers. One can train 40% of its operators for this task. Not only can all changeovers be done in a timely fashion, but set-up times have also been reduced since machine operators are able to pitch in and help in all phases of the process. Shift supervisors now create ad hoc changeover teams of trained molding operators on a daily basis, rather than having only one person or one crew perform them.One can create a proven formula for executing changeovers: Always use two-person teams, regardless of press size. The team members have defined roles and work one on each side of the press.

TIP NO. 5
COMMUNICATE EFFECTIVELY

Production schedules change unexpectedly. This leaves many molding firms scrambling to address issues of who, what, where, when, and how right before a machine is due to be changed. Often the result is that the machine sits idle longer than necessary.

One way to avoid this situation is to conduct daily production meetings. One can uses a “Manufacturing War Room” concept. Daily meetings are held between cross-functional teams to review and discuss the job schedule and make assessments of priorities and resources. The daily meetings help to anticipate and minimize unplanned glitches throughout the manufacturing sequence, including mold change-overs. Any problem that can affect part production, quality, and delivery is placed on a board in the Manufacturing War Room and is resolved within 48 hr.

It pays to get as much feedback as possible from everyone associated with the mold-change process. Doing so helps ensure the process is continually honed. And you never know where the next good idea will originate.

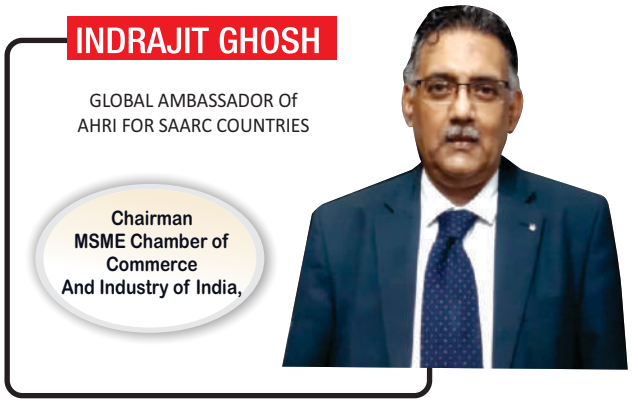
TIP NO. 6
DON’T NEGLECT MAINTENANCE

A common mistake among molders is to compromise on equipment maintenance. A broken ejector pin, stripped-out bolt hole on a platen, or a worn check ring will delay the successful start up of a mold.

Sanat N. Shah

The Importance and Global Growth of Flexible Packaging from 2020-2024

Three key insights cement why flexible packaging is, and will remain, a premium packaging solution.



As the saying goes, you only get one chance to make a first impression. In the packaging world,

flexible packaging is considered by many to be the optimal way for a company to put its best foot forward. Since the 1950s, flexible packaging has been driving innovation in the industry1, offering businesses a more affordable and customizable alternative to rigid packaging. Comprised of lightweight materials, often plastic or resin-based, flexible packaging has long been the preferred solution for food brands, consumer packaged goods and pharmaceutical companies, among others. But what is it about flexible packaging that makes it so impressive? And how can flexible packaging continue to evolve and innovate? There are three key insights that cement why flexible packaging is, and will remain, a premium packaging solution.

It gives important going-over available status of the Flexible Packaging producers with best raw numbers,
which means, definition, master suppositions and the most recent improvements over the around the world. The Report additionally compute the market size, statistics is collected through authentic sources ,Price,
Revenue, Gross Margin and Market Share, cost structure and development rate. The report considers the income produced from the deals of This Report and advancements by different application sections. And Impact COVID-19 and improving Plans for the Industry

PACKAGING THAT MAKES AN IMPRESSION

In today's digital world, the "unboxing" of a package is a distinct and anticipated consumer experience.
At its core, unboxing combines the senses of sight, sound, touch and sometimes smell to make customers feel valued by the brand. Done right, it can lead to strong customer loyalty. Leveraging digital printing on flexible packaging, companies can utilize the box interior to offer consumers a richer brand experience. By including a company or product logo, a QR code or promotional information, customized flexible packaging delivers a call to action driving consumers back to the company's website, social channels or product promotion platforms resulting in enhanced consumer engagement with the brand.

But how can a company keep repeat customers engaged and excited about the unboxing experience? Flexible packaging allows companies to easily and affordably
personalize with digital printing, so every unboxing experience is new to the consumer. Small modifications to the packaging will ensure that the consumer experience is always fresh and allow for an evolving "conversation" between the purchaser and the brand. When looking for a flexible packaging partner, companies should look for specialists that can offer packaging design and expertise, all the way through materials sourcing and production.
When one company provides packaging consultation from start to finish, they can work with the brand to design packaging that tells the brand's story in a unique and impactful way.

SMART SOLUTIONS FOR AN ECOMMERCE WORLD

It is undeniable that ecommerce is a mainstay of American life. While rigid packaging has historically been the go-to for shipment because of its durable nature, flexible packaging is evolving to be a viable alternative for certain companies. While not as structured as rigid packaging, flexible packaging is designed to absorb shock and impact, protecting the contents inside. In fact, flexible packaging — whether it be a mailer or a bag — can replace the box for a host of less-fragile materials including books, clothing and pharmaceuticals, just to name a few. Flexible packaging is more economic to produce and takes up less space in transport, which maximizes space thereby reducing costs and increasing value for brands by allowing them to ship more products at the same time.

But, it is not enough just to suggest that companies adopt smart packaging solutions. In 2019, Amazon implemented the Amazon Packaging Support and Supplier Network (APASS) for vendors and manufacturers to certify the durability of their packages. To achieve certification,

packages must go through a series of rigorous tests that evaluate the impact of shock, compression, vibration and extreme temperatures. Billions of packages are fulfilled through Amazon every year, so brands looking to compete in the e-commerce space should seek out companies that can complete APASS testing and certification while providing design recommendations for packages that do not meet the requirements.

By mandating that packages be APASS-certified, Amazon is requiring companies to look at all packaging options and alternatives to adopt the solution that will best serve the product they are looking to ship. For some, flexible packaging is the right solution, and Amazon's requirement helps ensure that it is a viable option for implementation.

SMART SUSTAINABILITY FOR THE FUTURE

As brands are facing increasing pressure from consumers to establish, maintain and expand sustainable business practices, packaging is undergoing the same scrutiny. There are alternate flexible packaging materials available that are not only sustainable, but also appealing to the consumer, making them a great option for brands looking to incorporate more sustainable business practices.

Fiber-based flexible packaging, such as craft paper, not only provides true protection for materials but is also curb side recyclable, thus, supporting a brand's effort to use more sustainable packaging. Even certain plastic flexible packaging has now been engineered to be more environmentally friendly.

The packaging industry has invested in technology to reduce the contents required to contain and secure a load. With proper stacking and loading of a palate, manufacturers can employ a thinner but equally durable plastic to secure the materials so, once discarded, it requires less space and reduces waste. This process, known as downgauging, signifies manufacturers' commitment to continually evolve industry practices and improve them whenever possible.

Many of the environmental advancements are driven by specific industry needs. Among Veritiv's customers is a bakery and snack food distribution company that sought out Veritiv to create packaging that was 33% compostable and renewable. Using 100% natural starch products and soy-based inks, Veritiv designed a nine-colour process print bag that reduced labour costs. Consumers are increasingly concerned about the environment, and they will continue to support companies that echo those values. The transition to a compostable bag helped create loyalty among the existing customer base and attract new ones. At Veritiv, we've seen time and time again that a brand's commitment to sustainability not only provides an environmental benefit, but a financial one.

Flexible packaging continues to be one of the most dynamic options for companies seeking impactful, portable and responsible packing solutions. It truly helps companies to make a better first impression and continue to delight consumers around the world. As the industry continues to evolve, expect flexible packaging to be at the forefront in driving innovation and advancement in the packaging world.

Over the last 10 years, flexible packaging has taken off, doubling in size to $228 billion in 2019. In Smithers latest market report The Future of Flexible Packaging to 2024 forecasts that it will continue growing by an annual rate of 3.3%, reaching $269 billion in 2024.

Global urbanisation has increased the demand for flexible packaging along with e-commence and technological advancements in barrier protection, active packaging and digital printing. At the same time, sustainability is also a major concern for the market.

Flexible packaging is replacing more traditional packaging, such as glass jars and metal cans, more and more each year as its benefits are acknowledged. These benefits include extended shelf life, improved cost economics, lower pack weights and lower transport costs. Use of flexible packaging can minimise transport costs at all levels, thanks to the lower pack weight and the ability to compress the packaging into small transport volumes. Flexible packaging also allows improved cost economics due to requiring less energy and resources than other packaging types, which means that the cost of production per packaging unit is less.

The market report identifies the key drivers and trends for the flexible packaging industry including areas such as:

- Sustainability - is both a driver and a challenge for the packaging market as consumers cut down on the use of unsustainable packaging.

- E-commerce - Consumer demand in e-commerce is continuing to rise and is predicted to continue to increase through to 2024.

- Product protection - Manufacturers are finding the protection provided by flexible packaging a benefit, thus increasing the likelihood of using it.

- Supply chain efficiency - Flexible packaging allows

manufacturers to increase efficiencies in manufacturing of products, including reduced transport costs and reduced waste.

• Digital printing-The benefits of digital printing for flexible packaging are widespread, including more economic short runs and an increased number of printable substrates.

• Economics - The economic cycle of a country has a major influence on consumer spending, which in turn affects the packaging market.

• Lifestyle and social influences - Busier and more demanding lifestyles are leading to growing demand in convenience products, particularly food items.

SUSTAINABILITY THROUGHOUT THE ENTIRE LIFE CYCLE

FLEXIBLE PACKAGING'S ENVIRONMENTAL EFFICIENCY

From its fossil fuel and water usage, to its carbon impact and product-to-package ratio, flexible packaging's efficiency is environmentally effective. As a leading voice in the sustainable packaging movement, the Flexible Packaging Association has committed significant resources to support flexible packaging's sustainability efforts. Through our ongoing research and initiatives, FPA provides a greater understanding of the environmental advantages and benefits of flexible packaging among consumer product companies, retailers and consumers.

SUSTAINABILITY BENEFITS OF FLEXIBLE PACKAGING

MATERIAL AND RESOURCE EFFICIENCY

The use of life cycle assessment tools has shown that flexible packaging usually results in less fossil fuel usage, greenhouse gas emissions, and water use than other formats due to its very light weight (source reduction).

TRANSPORTATION BENEFIT

Flexible materials are usually shipped either flat or on a roll like paper towels. This allows a large number of packages to be shipped on a truck, reducing the number of trucks needed for inbound materials versus rigid packaging.

HIGH PRODUCT-TO-PACKAGE RATIO

A measure of material efficiency is how much of a product sold to the consumer consists of product and how much of it is packaging by weight. Flexible packaging almost always has a higher product-to-package ratio when compared to other packaging formats.

PRODUCT PROTECTION

Flexible packaging offers product protection, keeping products together reduce spoilage. Additionally, flexible's ability to resist denting or breakage without spilling contents make it attractive for e-commerce shipping.

SOURCE REDUCTION

Flexible packaging is lightweight, usually weighing much less than other materials and thereby providing source reduction, which is the top component of the U.S. Environmental Protection Agency's Waste Hierarchy.

EXTENDED SHELF LIFE

Value added flexible packaging for food items often contains a barrier layer that extends the shelf life of food, reducing the amount of food waste associated with perishable items.

TIRUPATHI HYDROCARBON PVT. LTD.

OUR PRODUCTS

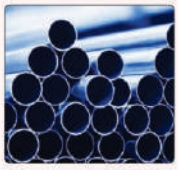
- Paraffin Wax
- Slack Wax
- Reside Wax
- Wax Oil
- Rubber Process Oil
- Calcium Grease

INDUSTRIAL APPLICATION


Grease Industry


Matches Industry


Candle Industry


Pipe Industry


Lubricant Industry


Paper Coating


Furniture for Shine


Ink Industry

OUR PRODUCTS

- Calcium Fillers
- Talcum Fillers
- Calcium Carbonate
- Anti Moisture Granuels
- Coated Anti Moiture Powder

INDUSTRIAL APPLICATION

- LD Film
- HM Film
- Carry Bag
- HDPE / PVC Pipes
- Woven Sacks
- Tarpulin Sheets
- Parcel Sheets
- Grocery Covers
- Buckets / Tanks

Contact :
+91 80 4112 3220
+91 6364 002 333

Registered Office :
208, Elegance Royalle, 16/31, Sindhi Colony,
2nd Cross JC Road, Bangalore 560 002.

Plant :
SY No. 145 / 1B2-1C2, Samanpally Village,
Sappadi Road, Shoolagiri, TN - 635117

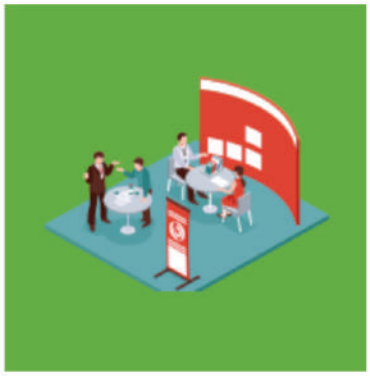
Email: tirupatichemicalsmail@yahoo.com | www.tirupathihydrocarbon.com

Plastic Tomorrow
Bi-Monthly Magazine, Bi-Language English & Gujarati Plastic Industry Periodical

Business Expand at Your Door Step...

www.plasticudyog.com

Our Editions



Machinery | Moldings | Raw Material | Packaging Material
Additives | Plastic Articles | Trade Inquiry | Exhibition
more....

DJ'S PUBLICATION

Email: plasticudyog@gmail.com | plastictomorrow@gmail.com
Contacts: +91 9327 344 559 | +91 9426 334 455
Whatsapp: +91 9998 687 659

Owner, Publisher & Printer: Dinesh Jivanlal Shah, Publisher From: 303 - Sunsilk Apartment, B/H. Dinesh Mill, Patel Colony, Akota, Vadodara - 390 007. Gujarat, India
Printing Press: Gayatri Offset, 16, Dwarkesh Chamber, Opp. Sardar Market, Kewadabaug, Vadodara 390001, Gujarat, India.
Editor: Dinesh Jivanlal Shah