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Plastic Tomorrow

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Arihant Poly Containers

AN ISO 9001 - 2008 CERTIFIED COMPANY

We are Manufacturer and Supplier of wide range of

HM - HDPE Plastic Containers with multipoint parison control system.

We produce range from 5 Ltr. to 80 Ltrs.

R. S. No. 70/2, 70/3, 70/4, Block No. 54, Nandesari, N. H. 08, Village Fajalpur,

Dist. Vadodara - 391 340, Gujarat, India

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Online Rotogravure Printing Machine

MSC
ROTO | FLEXO | LAMINATION | 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

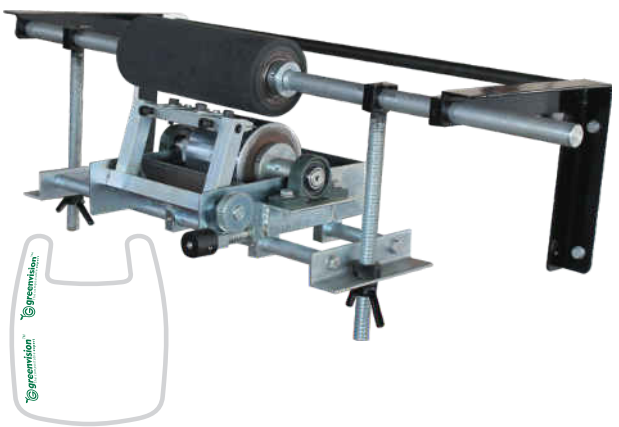
Air Pneumatic Pressure Rubber Roller

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

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COSMO FILMS REPORTS 171 PERCENT INCREASE IN Q3 FY20 PAT

COSMO FILMS
Engineered to Enhance

Cosmo Films Limited

In Rs. Crores	Q3 FY20	Q3 FY19
Net Revenue	579.9	557.7
EBITDA	77.3	36.3
PBT	51.9	11.1
PAT	36.1	13.3
EPS (in Rs.)	18.8	7.0

New Delhi, February 13th, 2020: Cosmo Films Limited, a global leader in films for packaging, labeling & lamination applications and synthetic paper today declared its financial results for the quarter ended December, 2019.

Q3 FY20 net revenue increased by 4 percent on YOY basis backed by a better product mix and higher volumes. The improved performance is on account of higher sales of speciality films and strong operating margin on BOPP films (due to balanced demand supply scenario). Last year results included Rs. 8 crores of profit on sale of assets in US subsidiary following the relocation of plant.

Commenting on the financial performance of the company Mr. Pankaj Poddar, CEO, Cosmo Films Ltd. said, "We have had one of the best quarterly results with a significant contribution coming from sales of newly developed products. The company's R&D has done successful trials for in house manufacturing of certain masterbatches and coating chemicals as a part of backward integration/maintaining secrecy as well as diversification into new related business. The company shall start production, sales and internal consumption of these masterbatches and chemicals over the next few quarters under a newly wholly owned subsidiary.

These are low capex projects with good margin expansion for the company."

About Cosmo Films Limited

Established in 1981, Cosmo Films Limited, a global leader in films for packaging, labeling & lamination applications and synthetic paper. With engineering of innovative products and sustainability solutions, Cosmo Films over the years has been partnering with worlds' leading F&B, personal care and tobacco brands and packaging & printing converters to enhance their consumer experience.

Company's film offerings include BOPP and CPP films. Today, the company is the largest exporter of BOPP films from India and also the largest producer of thermal lamination films in the world. Its customer base is spread in more than 100 countries with manufacturing units in India, Korea & Japan.

For further information,
www.ami.international

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Signature of Publisher

FOAM FOR E-MOBILITY

FOAMPARTNER DELIVERS FOAM KNOW-HOW FOR ACOUSTIC AND THERMAL INSULATION IN RINSPEED'S NEW METROSNAP

In their new modular MetroSnap concept car, Swiss mobility think tank Rinspeed is once again relying on innovative foam technology from FoamPartner to ensure highly effective acoustic and thermal insulation.

"One of the key advantages of electric vehicles is

the ability for fast acceleration and low-noise drives. But the latter places higher demands on the insulation of the passenger compartment against rolling and wind noises," says Kay Kosar, Head of Marketing & Sales, Acoustics & Thermal Solutions (A&TS) Europe at FoamPartner. "At the same time, the power consumed by heating and air-conditioning must be minimized to ensure maximum driving ranges. In both disciplines, our advanced foam solutions are in their element." The design of the MetroSnap builds on the MicroSnap and other concept cars from previous years. The main components of the concept car are a 'Skateboard' chassis and quick-change superstructure or 'Pods' for passenger and cargo transportation. The fully electric, connected and autonomously moving vehicle takes advantage of state-of-the-art technology from distinguished partner companies. Its encompassing concept – including a composite/steel body, 3D printed components, lidar sensors and a drive-by-wire system – also extends to battery leasing, insurance and payment services. The interior design features cutting-edge equipment, such as a digital cockpit and aircraft seats. "For the interior of the MetroSnap, we paid special attention to providing high aesthetics, as well as being able to offer a durable and protective feel-good environment," emphasizes Frank M. Rinderknecht, CEO of Rinspeed AG. "FoamPartner is the perfect address for us to meet these needs. Their specialized expertise in acoustic and thermal insulation, which is already well-proven in the forerunners of MetroSnap, helps us to maximize the autonomous driving experience," he adds. With its business segments Acoustic & Thermal Solutions (A&TS) for acoustic and thermal insulation products and Automotive Rolls (AR) for vehicle interiors, FoamPartner specializes in high-quality low-emission and low-odor polyurethane ester and polyurethane ether foam solutions. Typical automotive interior applications include headliners

and door panels, as well as large insulation and damping components, such as the dash inner encapsulation unit. The application engineers at the company's Techcenter have extensive expertise in the field of automotive acoustics and in the development of lightweighting PUR foam systems. "Our long-standing partnership with Rinspeed underscores our leading role as a customer-focused niche player in tailor-made foam solutions. To meet the rising demand, we will shortly commission a new Conversion Center at our Duderstadt site in Germany, which will significantly expand our supply capacities," adds Dr. Michael Riedel, CEO at FoamPartner.

Reader enquiries

FoamPartner

www.foampartner.com

Courtesy

HENKEL AND COVESTRO TO COMBINE THEIR STRENGTHS TO PROMOTE E-MOBILITY

ADHESIVE SOLUTIONS FOR EFFICIENT LI-ION CELL ASSEMBLY

As automotive electrification continues to evolve, powerful lithium-ion (li-ion) battery architectures are at the center of discussions around electric vehicles. While battery system designs vary by manufacturer, the joint performance objectives for all automotive battery technologies are longer lifetime, operational safety, cost efficiency and reliability. In their most recent collaboration, Henkel and Covestro developed a solution enabling the efficient fixation of cylindrical li-ion battery cells inside a plastic cell holder. The solution is based on a UV-curing adhesive from Henkel and a UV-transparent polycarbonate blend from Covestro. With a strong consumer push to reduce electric vehicle prices, large-scale and cost-efficient li-ion battery cell assembly is a prerequisite for every automotive OEM. As such, Henkel's Loctite AA 3963 battery assembly adhesives and Covestro's UV transparent polycarbonate blend Bayblend® were developed for compatibility with high-volume automated dispensing techniques and offer flexible and fast cure mechanisms. The acrylic adhesive was formulated for use with the cell holder, which is constructed of a special flame-retardant plastic. It provides strong adhesion to the substrate material and offers production adaptability through long open times and short cure cycles. Efficient and flexible production"High-volume manufacturing operations with short cycle times and process flexibility are essential," explains Frank Kerstan, Head of e-Mobility Europe at Henkel. "The Loctite OEM-approved adhesive designed to secure cylindrical li-ion cells into a carrier is a one-part, cure-on-demand formulation. After high-speed dispensing, the material's long open time inherently builds adaptability into the process by allowing for any unexpected production interruption. Once all cells are placed into the adhesive and secured in the holder, curing is activated with ultra-violet (UV) light and takes place in less than five seconds." This is a major advantage over conventional manufacturing where curing times can range from several minutes to hours, thus requiring additional storage capacity for parts. The cell holders are manufactured from Covestro's PC+ABS blend Bayblend® FR3040 EV. With a thickness of only one millimeter, the plastic already meets category V-0 of the Underwriters Laboratories' UL94 flammability rating but shows good permeability for UV radiation in the wavelength range above 380 nanometers."The

material allows us to construct dimensionally stable parts that are necessary for automated mass assembly," says Steven Daelemans, Market Development Manager E-Mobility in the Polycarbonates segment at Covestro. "Together with the fast-curing capability of the Loctite adhesives, this material combination delivers an innovative approach to large-scale cylindrical li-ion battery module production."Watch this video on how Covestro's and Henkel's solutions enable the efficient assembly of Li-ion cells in electric vehicles.Loctite is a registered trademark of Henkel and/or its affiliates in Germany and elsewhere.

Reader enquiries

Henkel AG & Co. KGaA

www.henkel.com

Courtesy

OQ BUILDS ON INDIAN MARKET FOOTPRINT AT PLASTIVISION - 2020

OQ, the new brand regrouping of Oman Oil and Orpic Group's nine business units, will offer its growing range of products, as well as showcase its specialty geotextile solutions at Plastivision 2020 in Mumbai this January (Hall 4, C3-1).

For over a decade, OQ has had a presence in the Indian market, providing agile solutions for innovating partners striving to sustainably increase performance. One of these achievements has been improving infrastructure as a reliable polymer partner, through OQ's PP solutions for geomembranes.

In both India and Bangladesh, tests have been conducted with sandbags and the innovative geomembranes in an effort to prevent erosion and increase the lifespan of roads. The use of geotextiles and geomembranes are part of the solution to improve road conditions and safety, especially during times of heavy flooding.

"Our clients and stakeholders can count on OQ to be a solid partner, collaborating on customized solutions along their value chain, to help them meet evolving market needs shaping our industry. We have been supplying the market in durable geo-textile grades since 2006 and helping to sustain infrastructures and improve people's lives along the way," says Talal Al Awfi, Chief Commercial Officer, OQ.In addition to roads, geotextiles are ideal

materials for many infrastructures works, such as harbors, landfills, drainage structures, parking lots, airport runways and other civil projects. They're a synthetic permeable textile material used to improve the soil characteristics.

OQ's recently introduced Luban fiber HP5101LC is a homo-polymer grade that has been specifically developed for the extrusion of staple fibers and high tenacity fibers for applications like geo-textiles. Another new woven grade for geo-membrane that OQ will feature at Plastivision is HP1102LC. These solutions are a controlled Rheology grades that have narrow molecular weight distribution. As a result, the products yield a high-tenacity product that is durable enough to withstand infrastructural and heavy-duty applications. They also provide smooth and easy processability by achieving high elongations values which in return reflect in better mechanical properties.

Already available in 60 countries, OQ aims for its Luban brand of polymers to continue being the differentiator shaping the megatrends impacting the PP and PE industry.

"Our team helps make more possible by going beyond standard grades and working closely with local additive researchers, machine suppliers and industry professionals globally to ensure quality consistency and on-going sales support," says Gilles Rochas, GM Performance Chemicals.

In addition to its Luban grades, OQ will be showcasing its wide range of BOPP films and other solutions including Oxo products, such as inks and plasticizers for the packaging and agricultural industries, respectively. This is made possible because OXEA is one of OQ's nine core assets.

During Plastivision, OQ looks to forward to the opportunity to introduce the company's new branding while establishing new relationships in growing regional market. Visit OQ's booth at Hall 4, C3-1.

Reader enquiries
OQ
www.oq.com

Courtesy

ELIX POLYMERS PROVIDES LEADING QUALITY ASSURANCE AND TECHNICAL VALUE SERVICES FOR PRE-COLOURED ABS USED IN HEALTHCARE APPLICATIONS

ELIX Polymers, a leading specialist in high-performance ABS materials, will demonstrate its commitment in the healthcare sector at Pharmapack 2020, the European pharma packaging industry exhibition taking place on February 5 and 6 at Paris Expo, Porte de Versailles. The company, which is enhancing the visibility of its quality assurance and key technical services associated with medical-grade pre-coloured ABS compounds, has its own stand, K60, in Hall 7.2. It will show its product portfolio, demonstrate new innovations, and discuss its service offering.

Quality assurance lies at the heart of the ELIX value proposal. In the case of medical grades of the company's ABS, it covers all pre-coloured formulations, including the colour recipes. Colour stability is achieved through a purpose-developed material selection and homologation process, testing on all incoming raw materials, intermediate control during manufacturing, and extended testing procedures on final compounds.Processors can take one of two approaches when it comes to choosing a medical grade of ABS: they can take a pre-coloured product, or they can take an ABS in its natural colour and blend it themselves during moulding, using a colour masterbatch. To reduce their exposure to risk in regulatory compliance, several medical OEMs prefer ELIX pre-coloured medical ABS. This is because ELIX guarantees the biocompatibility of the complete material formulation, including the additives and the complete colour recipe.

Even though the concentrations of a certain substance in a natural ABS and in a colour masterbatch may separately comply with relevant legislation, the maximum concentration limits may be exceeded in the resulting coloured ABS when blending the natural ABS with the masterbatch to achieve the target colour. In addition, use of masterbatch can increase the risk of non-compliance because there may be interaction among components – something that is not always easy to predict. These risks are minimised with pre-coloured ABS, as the compliance is verified and certified on the final coloured material formulation. ELIX tests the biocompatibility of its coloured grades of medical ABS in accordance with ISO 10993-1 and USP class VI. Reduction of complexity is a natural consequence of having just one partner providing multiple aspects of value. Since ELIX can supply medical-grade ABS in the target

colour, medical OEM customers don't need to involve and manage different parties; they do not have to obtain separate declarations from each different supplier, or evaluate the risks of potential interaction between substances provided by different suppliers. They can get all the relevant certifications, covering the complete material formulation, in one step, from a single source. This also results in a higher warranty for medical OEMs.

Batch production implemented at ELIX makes product traceability much easier than with production in big run sizes typical of the mass polymerization process. Batch production makes it possible to conduct specific tests on individual batches, in accordance with customers' specific requests. Moreover, batch sizes can be more easily adapted to customer needs and resulting lead times are shorter than average industry lead times.

ELIX key technical services

Many medical OEMs prefer ELIX pre-coloured ABS solutions because of the positive impact of ELIX technical services on their businesses. These services comprise the colour development service, product stewardship, special testing, formulation and sample storage, mould simulation service and injection moulding guidelines.

ELIX medical ABS is available in numerous colours; customers have access to a database of more than 120 matched colours. But the company's Colour Development service offers even more: new colours can be developed on request by a highly experienced team specialized in the selection of FDA and EU-FC approved pigments and additives. The list of admitted ingredients is provided by the ELIX Product Stewardship department, which adds value by constant surveillance of admitted substances and concentrations and by guaranteeing that optimized formulations stay within legal limits.

The continuously changing medical regulatory framework presents an important risk for medical OEMs. This risk is considerably reduced by the ELIX Product Stewardship service, with a significant positive impact on an OEM's business.

The recent changes to ISO 10993 (Biological evaluation of medical devices), and in particular to Part 18 (Chemical characterization of materials), put great emphasis on chemical characterization of materials. ELIX Polymers provides support to medical OEMs through its Special Testing service, which provides internal and external tests beyond what is included on the TDS, to characterize ELIX material. Test methods include infra-red spectroscopy, gas chromatography and other techniques. New types of tests are also available on demand.

ELIX technical service comprises a no-change agreement and sample storage for medical ABS grades. In connection with a long-term supply agreement, three years no-change product formulation (including colour recipe) is assured and three years sample storage is provided.

ELIX also offers key Technical Services in the field of material processing. For a robust injection moulding process, mould simulation and mould design support are very useful in predicting material processing behaviour. ELIX offers a Mould Simulation service, which consists of Moldflow and Moldex3D software files that include ELIX medical ABS material data properties. These files can be used in software simulations to predict an optimized injection process, reducing scrap rates and increasing quality in parts. Injection moulding guidelines are also a valuable support to injection moulders – both during the design phase for selecting the right equipment, tools and processing parameters, as well as in the production phase to identify common defects and their root causes, and in solving such issues.

ELIX quality assurance and technical service represents a key value proposal to Medical OEMs and their supply chain. It is complemented by ELIX commercial services, which are offered through the ELIX customer service and sales team.

Reader enquiries

ELIX Polymers

www.elix-polymers.com

Courtesy

EXHIBITION DETAIL

EXHIBITION	COUNTRY	DATE
COMPLAST	JOHANNESBURG (S.AFRICA)	3-5 MARCH 2020
PLASTIVISION ARABIA-2020	EXPO CENTRE-SHARAJ-UAE.	16-19 MARCH 2020
CHINAPLAST	SHANGHAI- CHINA	21-24 APRIL 2020
COMPLAST	ADDIS ABABA- ETHIOPIA	19-21 JUNE 2020
MITEC	KUALA LUMPUR (MALASIYA)	16 TO 19 JULY-2020
PLAST ASIA-2020	BIEC-BANGALORE	19-22 JUNE 2020
COMPLAST	YANGON- MYANMAR	2-4 JULY 2020
COMPLAST	NAIROBI- KENYA	14-16 JULY 2020
COMPLAST	COLOMBO - SRILANKA	20-22 AUG 2020
INDIA PLASTICS SHOW-2020	GANDHINAGAR	20-22 SEPT 2020
COMPLAST	LAGOS - NIGERIA	1-3 DEC 2020
PLAST SHOW	AHMEDABAD	17-20 DEC 2020
IPAMA	GREATER NOIDA	3-8 FEB 2021
PLAST INDIA-2021	PRAGATI MAIDAN-NEW DELHI	4-9 FEB 2021
PLAST FOCUS	GREATER NOIDA	5-9 MARCH 2022

COMFORTABLE TO WEAR AND COMPACT IN SIZE KRAIBURG TPE IS SUPPLYING A SKIN-FRIENDLY THERMOPLASTIC ELASTOMER FOR AN INNOVATIVE PROTOS® HEADSET

The Austria-based company Pfanner Schutzbekleidung GmbH is having the headband for its Protos® Headset Integral manufactured by injection molding of a thermoplastic elastomer (TPE) from KRAIBURG TPE. The material provides excellent processability and ensures high wearing comfort.

From forestry and agriculture, to industry and road construction, through to hunting and air rescue services – occupational health and safety involves more than just functional reliability. For people to actually wear the appropriate or obligatory personal protective equipment they need, it has to have a comfortable, lightweight and practical design. And the same also applies to hearing-protection headsets, which need to be designed so as not to cause pressure marks and skin irritations or tug on the wearer's hair.

A high-performance compound from KRAIBURG TPE's VS/AD/HM THERMOLAST® K series was therefore selected for the headband of the Protos® Headset Integral, developed by Westcam (Mils, Austria) and distributed by Pfanner Schutzbekleidung GmbH (Koblach, Austria). In addition to its velvety surface (VS), outstanding adhesion (AD) and high mechanical (HM) properties, this high-tech material also offers a wide range of design freedom and allows cost-effective processing.

"The main challenge was to mold the relatively large headband for the headset in a dimensionally accurate way and with high repeatability in the shortest possible cycle times, while ensuring a clean, homogeneous impression without sink marks," emphasizes Reto Huber, managing director of Huber Kunststoff AG. "The excellent flowability of the KRAIBURG TPE material perfectly matches these requirements and provides flawless surfaces directly from the mold."

A steel spring wire that is incorporated into the headband ensures the required tension and serves to mount the clips on each side that accommodate the frames for the hearing protectors. The clips are made of an acrylonitrile-butadiene-styrene copolymer (ABS) with a thermoplastic elastomer (TPE) injection-molded on the inside for reliable insulation of the head from the steel wire. The TPE's velvety and soft feel makes the headband and clips extremely pleasant, pressure-free and comfortable to wear.

The selected THERMOLAST® K compound combines a hardness of 60 Shore A with high tensile strength, tear strength and breaking strength. The wear-resistant surface also has long-term resistance to sebum, creams and common household detergents. In addition, the TPE meets the requirements of ISO 10993-10 for irritation-free tolerability of

materials for applications that are in contact with skin. "We already had very good experience with a thermoplastic elastomer from KRAIBURG TPE that was used for the visor of the Protos® Integral Safety Helmet," adds Martin Greber, head of development at Westcam. "The TPE in that device serves as a cushioning and sealing lip on the inside of the visor. It's combined with the edge of the visor, which is made of polyamide, using multicomponent injection molding. The adhesive strength of this hard/soft application has already been tried and tested many times in practical use, and that was why THERMOLAST® K was also shortlisted for

the wire/TPE and ABS/TPE combinations in the headset from the start."

The Protos® Headset Integral was specifically developed for capsule ear protection, with the advantages of a modular structure and compact size – with minimal protrusion when worn and a small packing size when folded. The hearing-protection cups are mounted in their own frames, which are fixed to the clips on each side of the headband and are also designed to accommodate the temple arms of the optional Protos® Protective Glasses, so that no sound bridges of any sort are created overall. Additional accessories include a Bluetooth communications solution with a USB charging bar, the technology for which is fully integrated into the hearing protectors. All of the materials in the headset have been tailored to suit its function and design perfectly. The VS/AD/HM THERMOLAST® K compounds can be precisely colored and have excellent color and UV stability, even in the gray color of the Protos® headband. The materials are produced in accordance with identical quality standards at all KRAIBURG TPE sites and are available in the manufacturer's portfolio worldwide.

Reader enquiries
KRAIBURG TPE GmbH & Co. KG

www.kraiburg-tpe.com

Courtesy

PLASTIC WASTE CONTROL PROJECT

ISLAMPUR MUNICIPAL CORPORATION PWCP ON GARBAGE DEPOT

Plastics have become a big problem today. In India alone, 25,490 tons of plastic is prepared every day. Significantly, according to the report of the Central Pollution Control Board, 40% of plastic waste in the country of 25,490 tons, i.e. 10,340 tons of garbage was not raised. Plastics of 15,342 tons of large 60 cities are prepared every day, out of which 9,205 tons of plastic is reused, the remaining 6,137 tons of plastic as it form i.e. un-allotted . There is a serious plastic problem. On that problem, . Inventor Sachin Deshmukh (Sangli) has revised the invention as a Waste Plastic Product Machine. This efficient measure is for this reason any kind of plastic assembled at the garbage depot can be processed directly into the machine such as plastic bricks, paver block, tree guards, mile stones etc.

If the plastic waste control project of Inventor Sachin Deshmukh becomes a part of the campaign like Swachh Bharat Abhiyan, Rural Development campaign etc, and the plastic which gets Garbage gets ten rupees per Kg rate , then above 5,000 Cr. rupees jobs can be prepared for poor people. To prove all this, Inventor Sachin Deshmukh created the roll model of his modification Islampur Municipality. “Plastic Waste Control Project (PWCP) ” using “Waste Plastic Product Machine” Technology and the Concept to “Control Plastic pollution Problem of India” is Inventor Sachin Deshmukh’s dream. . He have patented this technology. Islampur Municipal corporation under process approx. 1.2 tons waste plastic and to make 800 bricks. This bricks to crate plastic wall in Indian Army. This is first plastic wall all over world which created form waste plastic to created plastic bricks . This plastic to in feature can be make bunkers or post also living accommodation in zero degree area in J&K. This waste plastic to created wall work as a Insulation wall and cut the environmental temperature between inner and outer side. Remember here this is not a confidential information . Also peoples can be use this formula for the purpose of leaving accommodation and save form cold temperature . here two benefits gives a plastic bricks a) block a waste plastic in useable form and b) block a cold temperature .

FIRST PLASTIC WALL IN THE WORLD CONSTR IN INDIAN ARMY

We wants to be take responsible about the clean India campaign, it will be easy if Inventor Sachin Deshmukh will do 1) Model of the plastic waste control project of Islampur will be roll model and Islampur area inside Waste plastic will be given ten rupees of plastic rate. (This Inventor Sachin Deshmukh can also be done in any city, if your city population is less than 1,00,000) Plastic money gets from the waste, so people will not throw out plastic. The plowed plastic will be collected by the poor people, because they get ten rupees per kg. 2) A Ghantagadi (Garbage collector vehicle) will be kept for plugging plastic. After depositing plastic in that garbage, the person will be given money (Rs 10 per kg) in the form of token as per plastic weight. (These is zero value plastic waste and every day a person can collect only five kilos.) when person this token deposited in Islampur municipal corporation, the token according money is gives to a person. 3) This bricks use for the purpose of making road divider , paver block , footpath in Municipal garden , security wall , living accommodation in Indian Army etc. . 4) If garbage among plastic is out, then the other waste (biodegradable) use as a fertilizer and it will be sold for four rupees per kg.

After this role model is created, it will be called to copy to all the municipalities of the country. In this, we will have to understand the importance of the cleanliness of the people and 70% of the country will become clean definitely.

GLOBAL AND NATIONAL CONFERENCES/ VIP DEMONSTRATIONS / SEMINARS / EXHIBITIONS/ WHERE INVENTIONS WAS DEMONSTRATED

EVENT	DIGNITARIES	PHOTO
WASTE MANAGEMENT CONFERENCE 2019	PADMASHRI DR RAJGOPOLAN VASUDEVAN (PLASTIC MAN)	
MEETING WITH MINISTER, GAJENDRA SINGH SHEKHAWAT	MR. GAJENDRA SHING SHEKHAWAT MINISTER, DRINKING WATER AND SANITATION	
INTERACTION ON WPPM	TRANSPORT MINISTER SHRI NITIN GADKARI	
DISCUSSION ON WPPM	MINISTER SHRI GIRIRAJ SINGH	
DEMONSTRATION OF WPPM ON INDUSTRY DAY	PROF. DR. BHADH RAJ MEHTA , DEAN R & D	

INTERNATIONAL PLASTIC EXHIBITION	MR. SADANANDA GOUDA (MINISTER, CHEMICAL AND FERTILIZER)	
DEMONSTRATION OF WPPM	ENVIRONMENT MINISTER OF MAHARASHTRA SHRI RAMDAS KADAM	
INVENTOR SACHIN DESHMUKH IN MAHARASHTRA STATE LEVEL NEWS	SHRI RAVINDRA KHEBUDKAR, COMMISSIONER SANGLI MUNICIPAL CORPORATION	
DEMONSTRATION AT INDIA PLAST 2019	MR. SUBBA BANGERA DIRECTOR, PMMAI	
WASTE MANAGEMENT CONFERENCE 2019	PADMASHRI SHRI KARTIKEYA SARABHAI	

NEW PROJECT

આજકાલના સમયમાં જ્યારે અનેકાનેક ઉદ્યોગો અસ્તિત્વ ધરાવે છે. એનાથીયે ઉપર જ્યારે બજારમાં આવા ઉદ્યોગો ચલાવવા માટે અનેક લોકોની મોટી ભીડ છે, વિચારણાનો વિષય એ છે કે કઈ જાતના અને કેવા ધંધ શરૂ કરી શકાય ?

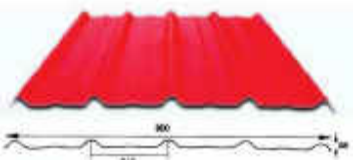
પ્લાસ્ટિક :-

પ્લાસ્ટિક એક એવી તકો આપે છે કે જેમાં ૧૫ થી ૨૦ ટકા ઉદ્યોગ નો વાર્ષિક વિકાસ થાય છે, જ્યારે બીજા અનેકાનેક ઉદ્યગો ને મંદી ઘેરી વળે છે. અનેક મટીરીયલ ની જગ્યા પ્લાસ્ટિકે લઈ લીધી છે. પ્લાસ્ટિકને લોખંડની જેમ કાટ લાગતો નથી. લાકડાની જેમ કહોવાતું નથી. વજનમાં હલકું છે અને સસ્તું પણ છે. એના ઉત્પાદન માટે ઓછી ઉર્જા લાગે છે. આસાનીથી રી-સાયકલ થાયછે. નાના માં નાના માણસો પણ પ્લાસ્ટિકના ધંધામાં પડી શકે. સબસીડી-અનેક જાતની ચાલાકીઓ વાપરીને લોકો સરકારને મુરખ બનાવીને પડાવી જાય છે. જય હિંદ.

હવે કામની વાતો કરીએ :-

પ્લાસ્ટિકમાં હવે કરવાં જેવા ધંધાની વાત :- કાગળને પ્લાસ્ટિક લેમીનેટ કરો. પ્લાસ્ટિક લેમીનેટેડ કાગળ, પેપર કપ, મિઠાઈનાં ખોખાં, અને બીજા અનેક જાતના પેકેજીગ માટે જરૂર પડે. મશીનરી માં રોકણ રુપિયા ૯૦ લાખ આશરે.

પ્લાસ્ટિકની પેન્સિલ બનાવો :- મશીનરી માં રોકાણ રૂપિયા બે કરોડ આશરે, મોટું ઉત્પાદન અને મોટો ધંધો, ખુબ મોટો નફો.



પ્લાસ્ટિકનાં રૂફીંગ શીટ બનાવો :- મશીનરીમાં રોકાણ આશરે રૂપિયા એક કરોડ સાઈઠ લાખ સુધી. ખુબ મોટો ધંધો અને નફો.

પ્લાસ્ટિક એર બબલ ફિલ્મ :- ૨/૩ ૪/૫ લેયર

પેકેજીંગ ફિલ્મ. મશીનરીમાં રોકાણ આશરે રૂપિયા પચાસ લાખ.

પ્લાસ્ટિકની એક દિવાલ વાળી કોરુગેટેડ પાઈપ બનાવો :- મશીનરીમાં રોકાણ રૂપિયા બાવીસ લાખથી

પ્લાસ્ટિકની સૂતળી-દોરી બનાવો :- મશીનરીમાં રોકાણ આશરે રૂપિયા એકવીસ લાખ.

પ્લાસ્ટિકની લુપ પીન બનાવો :- મશીનરીમાં રોકાણ આશરે રૂપિયા ૩૦ લાખથી શરૂ.

પ્લાસ્ટિકની ઈજેક્ષન સીરીંજ :- ફક્ત રૂપિયા ૦.૮૫માં તૈયાર થતાં આ સીરીંજ રૂપિયા ૧.૧૫ માં વેચાય છે. મશીનરીમાં રોકાણ આશરે રૂરિયા બે કરોડ.

NEW PROJECT

પ્લાસ્ટિકનાં ઈમીટેશન માર્બલ પ્રોફાઈલ :- મશીનરીમાં રોકાણ આશરે રૂપિયા ૭૦ લાખ.

પ્લાસ્ટિકનાં ઈમીટેશન બોર્ડ :- મશીનરીમાં રોકાણ આશરે રૂપિયા ૧.૫૫ કરોડ.

પ્લાસ્ટિકની બી ઓ પી પી ટેપ બનાવો :- મશીનરી માં રોકાણ રૂપિયા ૨૦ લાખથા શરુ.

પ્લાસ્ટિકનાં પ્લાયવુડ જેવા બોર્ડ, મરીન પ્લાય જેવાં બોર્ડ મશીનરીમાં રોકાણ આશરે રૂપિયા એક કરોટ સાઈઠ લાખથી આગળ.

પ્લાસ્ટિકનાં - (વુડ+પ્લાસ્ટિક) દરવાજાં અને બોર્ડ (ઉપર પ્રમાણેનાં) અને ફ્રેમ મશીનરીમાં રોકાણ આશરે રૂપિયા સવા ચાર કરોડ.

વુડ + પ્લાસ્ટિક નાં પ્રોફાઈલ્સ જેમાંથી અનેકાનેક વસ્તુઓ બની શકે.

મશીનરીના એકજ સેટ અપ અને થોડાઘણાં મોલ્ડ વસાવીને રૂપિયા આશરે પોણા બે કરોડ સુધીમાં આ ધંધો ચાલુ થઈ શકે હજુ અંત નથી. બીજી ઘણી તકો પ્લાસ્ટિક આપે છે.

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EARTH 2020 WHAT Next and HOW...?

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The picture represents two concepts; about countries in the world… the first is in using data to understand our world, which, by the way, is becoming increasingly important as a science from which we can derive trends to create models and forecasts. The second is our human footprint, an increasingly valid means to justify implementing circular systems into our economy and everyday lives.

(COURTESY CIRCULARECONOMYASIA.ORG)

It was apparent that data, different from what traditional statisticians collect to measure an economy is needed as the backbone of the circular economy.

We need to

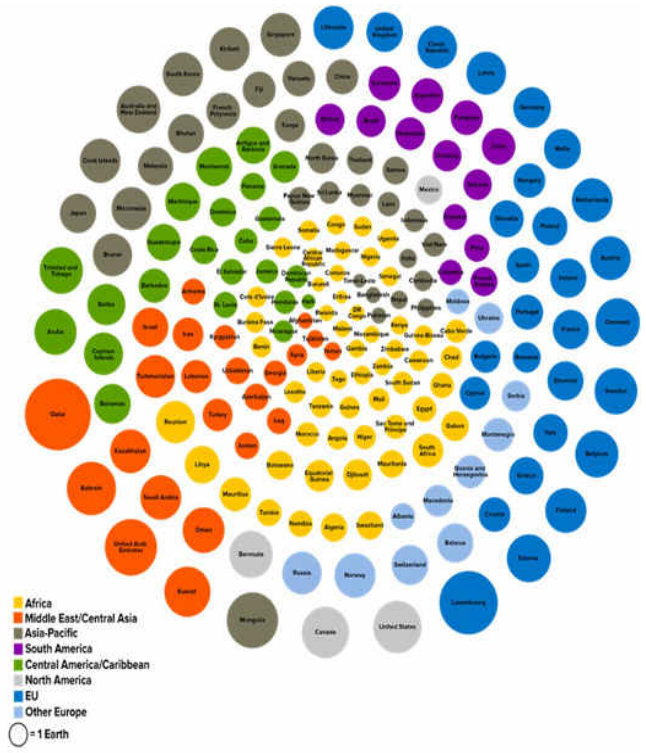
1. Use of plastics in the economy (volumes and types of plastics imported/exported, produced, and used in the manufacturing of products, etc.),

2. End-of-life management of plastics (collection of waste plastics, recycling paths and recycling rates, waste treatment, international trade in used plastics, markets/uses for recycled plastics, etc.)

Humans use as much ecological resources as if we lived on 1.75 Earths. The Ecological Footprint is the only metric that compares the resource demand of individuals, governments, and businesses against what Earth can renew.

How the Footprint Works

Ecological Footprint accounting measures the demand on and supply of nature. On the demand side, the Ecological Footprint measures the ecological assets that a given population requires to produce the natural resources it consumes (including plant-based food and fiber products, livestock and fish products, timber and other forest products, space for urban infrastructure) and to absorb its waste, especially carbon emissions.



The Ecological Footprint tracks the use of six categories of productive surface areas: cropland, grazing land, fishing grounds, built-up land, forest area, and carbon demand on land.

On the supply side, a city, state or nation's bio capacity represents the productivity of its ecological assets (including cropland, grazing land, forest land, fishing grounds, and built-up land). These areas, especially if left unharvest, can also absorb much of the waste we generate, especially our carbon emissions.
It is estimated that between 1950 and 2015, 8.3 billion tons of plastic were produced, of which only 7% were recycled. About half of the plastic we produce today is discarded after only one use. A paradigm shift and action is needed to rethink, recycle and manage plastics for our future.

Objectives

Equipping public and private organizations with accurate and updated data is essential to set mitigation goals and monitor progress over time. The calculation of the plastic footprint is the first step towards the 3R: reduce, reuse and recycle. This will allow the company to limit its impact on the environment and human health.

Plastic footprints on a business and sectoral scale can be done using the life cycle methodology (LCA), focused on the consumption of plastic

These are the scopes of our plastic footprint services:

- Inventory of use and disposal of plastics.

- Inventory of "leaks" of plastic in the environment.

- Plastic footprint reduction strategy.

The EU's new Circular Economy Action Plan, of 2020 has many things . All EU policymakers know that "involving stakeholders throughout the value chain" must include the supply chain coming out of Asia. The challenge for the new Circular Economy Action Plan lies in the ability to influence other regions as the EU cannot achieve their goals in isolation.

The EU is committed to eco-design or circular design. This is relevant for all of us in Asia and India too. Consumer engagement is, of course, necessary except the Action Plan goes one step further by wanting to phase out green washing and planned obsolescence. Most certainly a noble endeavor except there is a bit of a problem. Many businesses and people don't fully understand the circular economy, not because they think it is recycling but become confused as to how it is supposed to actually function.

EU Circular Action Plan is Sustainable Production Processes. Here is where the EU introduces the new SME Strategy to foster industrial collaboration through clusters. The document also states "...the EU Environmental Technology Verification (ETV) scheme will be registered as a EU certification mark and may extend its scope to promote cleaner production processes among SME's."

Less Waste More Value

Waste is on the increase, now each EU citizen generates approximately 488kgs per year with packaging waste reaching 173kgs per person per year in 2017 - the highest level ever.

Skills development for the circular economy is one topic frequently .

There is a lot of work for the EU to undertake to realize their circular dream. It is the interconnectedness of the global supply chain that presents the most challenges. Many Asian companies are no longer focused on European markets due to the ever increasing regulatory environment. How Asia responds once the Action Plan starts gaining traction will determine both the EU's circular ambitions and Asia's sustainability agenda.

As 2020 throws many challenges at us, we need to overcome and think and act how to move forward…

NEW PROJECT INJECTION MOULDING

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INTRODUCTION

Injection Moulding is an important part of our every day lives, our world would be very different without it and product designers need to know about it, they will use it many times during their careers.

Injection Moulding is the process of heating plastic granules to melting point before injecting them at high pressure through a nozzle into a mould. When the plastic cools the mould is opened and the newly formed plastic paart is removed.

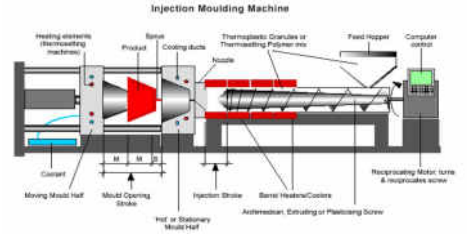
the process has been modified and developed in numerous ways and now there are many different types of Injection Moulding, such as :

0> Injection Blow Moulding
0> Twin / Triple Injection Moulding
0> Multi-component injection moulding
0> Multi-station injection moulding
0> Reaction injection moulding
0> Gas injection moulding - and many more.

TYPICAL MATERIALS

Thermoplastics	Thermosets
0> Nylon	0> Epoxies
0> Polystyrene	0> Melamines
0> Polyethylene	0> Unsaturated polyesters
0> Polypropylene	0> Phenolics
0> PVC	0> Urea
0> ABS/SAN	0> Polyureathane
0> PC	0> Polylactic acids
0> PET	
0> Eng. Thermoplastics	

INJECTION MOULDING MACHINES

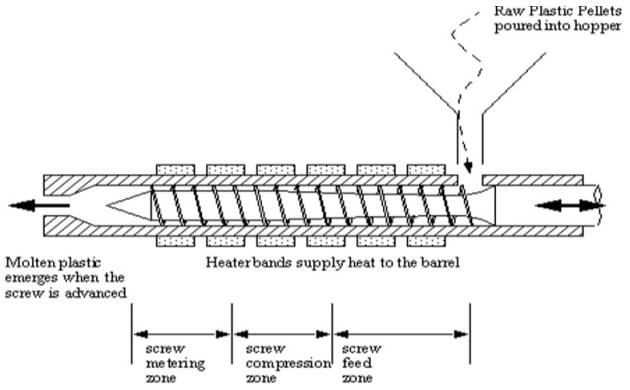


Atypical injection moulding machine is seen above with the covers removed. Plastic pellets are poured in the hopper & finished parts emerge from the dies.

Injection System

A material hopper acts as an input buffer

– A heated chamber melts the material
– An injector forces the now viscous fluid into the mold
– Previous mechanisms used an injection plunger
Current mechanisms use a reciprocating screw,
– Basically the screw extends from the hopper to the injection chamber.
– Along the length of the screw chamber, heater bands are used to melt the plastic.
– As the screw turns, it moves raw solid plastic from the hopper, to the injection chamber. The buildup of pressure in the injection chamber forces the screw back until enough for a shot has accumulated.
– The screw is forced forward to inject the plastic into the mold.



• There is a contribution to melting by pressure that allows the temperature of the heating bands to be lower.
• The purpose of the screw is to generate a homogenous melt with little orientation in flow direction.

TYPICAL ZONES CAN BE IDENTIFIED ON THE SCREW

> **Feed -** a screw with large cavities to carry more material.

> **Compression -** the depths of the screw thread reduce, leading to elevated pressures, and pressure induced melting.
> **Metering -** small and uniform threads to provide controlled quantities. This also serves as a final mixing stage.

• Screws are often low/medium/high compression ratio as a result of the change of screw volume from the feed to the metering stages - screw selection will vary between materials, but a low compression ration screw will ensure good melting in most cases.

• Screws are nitride treated to improve tool life. Screws might also be made slightly smaller to compensate for thermal expansion when heated.

• Screws are often driven by electric or hydraulic motors.

• The heat capacity and melting point temperatures of various materials determine the energy required to melt the plastic and the energy to be removed for solidification (and for ejection).

• The volume of the injection chamber determines the maximum mold cavity size. The volume provided is often for polystyrene. When using other materials the volume can be corrected.

CLAMPING SYSTEM

• The mold is held closed with a certain clamp tonnage.

• As cycle times decrease, the plastic melt becomes less consistent.

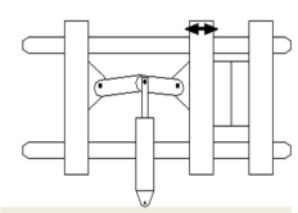
• Each heating zone uses electrical heating bands with thermocouples, or pyrometers to control the temperature.

• When injecting, the mold is moved then clamped shut. The mold halves are mounted/clamped/screwed on two platens, one fixed, one moving. The stationary platen has a locating ring to allow positioning on the mold half over the injection nozzle. The moving half has ejector pins to knock out the finished part. Larger plates are found on larger injection molding machines.

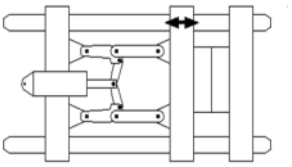
Injection molding machines pressure is calculated as injection pressure over an area in the mold.

The platens are actuated by hydraulic driven mechanisms. These are slow, but can exert great forces. In lighter presses other mechanisms can be used.

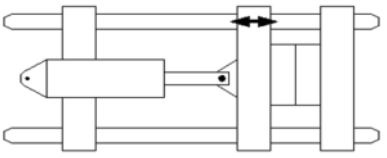
CLAMPING MECHANISM



Single toggle clamped mechanism



Double toggle clamped mechanism



Hydraulic clamp mechanism

INJECTION MOULDING MATERIALS

Materials

• Materials often come as raw beads. These can be mixed, colored, have other materials added, or reused.

• Quite often scrap parts are ground up, mixed with new materials and reused. But, caution is required to reduce contamination.

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