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Plastic Tomorrow

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SABIC introduces new caps & closure material, outlines strategies for growth and the circular economy at the Berlin Plastic Closures Innovation 2018

SITTARD, THE NETHERLANDS, May 23, 2018 - SABIC is reinforcing its activities in the plastics caps and closures (C&C) market. At the Plastic Closures Innovations Conference in Berlin on May 22-24, where SABIC is the headline sponsor, the company will discuss its new Caps & Closures Industry segment, launched at the beginning of the year. It will also introduce its latest materials and solutions for drink, food and non-food packaging caps and closures, and outline its latest measures for addressing issues in the circular economy.

"With our extensive range of polyethylenes and polypropylenes, SABIC has already built a strong position in caps and closures," says Hans Pierik, SABIC's global Caps and Closures segment leader. "But the Caps & Closures market is growing and changing all the time, and we are moving quickly to respond to current and future developments." SABIC will present on the final day of the conference, which is organized by UK-based consultant AMI.

SABIC's goal is to extend its application coverage across food and beverage and non-food areas alike, especially detergents, cosmetics and pharmaceuticals. "SABIC's Caps & Closure portfolio spans all types of polyethylenes and polypropylene (PE, PP), through to engineering plastics like polycarbonate," Pierik says. "Many of these have a long track record, but the important thing is to never stand still. This year we will be adding more innovative materials, including a new HDPE that makes it possible to cut weight in caps for carbonated soft drinks (CSDs)."

SABIC has developed a new multi-modal grade of HDPE with excellent organoleptics for this major application. It combines an excellent environmental stress cracking resistance (ESCR) with good flow, allowing cap manufacturers to design very lightweight closures. SABIC® HDPE CCX027C polymer exhibits strong shear thinning, which means that even though it has a relatively low MFI (0.8 g/10 min, 2.16 kg), its flow characteristics during injection molding are similar to those of a unimodal HDPE with an MFI more than three times higher.

"Having a new global segment organization for Caps & Closure shows our commitment to a customer-driven strategy and industry focus," says Ahmed Al-Musfer, Director of Global Marketing & Industry Solutions at SABIC. "On the development side, it will help us bring innovations to market more quickly, while our improved and dedicated sales and technical support people will be able to respond more effectively to service needs of customers and OEMs."

SABIC is now addressing several trends in the market related to sustainability issues. Improvements to ESCR and physical properties like stiffness and impact strength will enable extra lightweighting; reductions in required processing temperatures will help processors save energy and cut cycle times; and even better organoleptics will meet needs for caps that have no effect on the taste of packaging contents (especially important for bottled water).

The company is also contributing to a more sustainable packaging industry by partially replacing crude oil with renewable feedstocks in its production of polyethylenes and polypropylenes. Properties of the partly bio-based plastics are identical to those made from non-renewables alone.

As the company announced at the 2018 World Economic Forum (WEF) in Davos, Switzerland, SABIC is the first in the industry that is committed to scale up high-quality recycling processes for chemical recycling of mixed plastic waste to the original polymer. SABIC has the know-how, the resources and the resolve to help reduce the waste-stream.

ABOUT SABIC

SABIC is a global leader in diversified chemicals headquartered in Riyadh, Saudi Arabia. We manufacture on a global scale in the Americas, Europe, Middle East and Asia Pacific, making distinctly different kinds of products: chemicals, commodity and high performance plastics, agri-nutrients and metals.

We support our customers by identifying and developing opportunities in key end markets such as construction, medical devices, packaging, agri-nutrients, electrical and electronics, transportation and clean energy.

SABIC recorded a net profit of SR 18.4 billion (US$ 4.9 billion) in 2017. Sales revenues for 2017 totaled SR 149.8 billion (US$ 39.9 billion). Total assets stood at SR 322.5 billion (US$ 86 billion) at the end of 2017. Production in 2017 stood at 71.2 million metric tons.

SABIC has more than 34,000 employees worldwide and operates in more than 50 countries. Fostering innovation and a spirit of ingenuity, we have 11,534 global patent filings, and have significant research resources with innovation hubs in five key geographies – USA, Europe, Middle East, South Asia and North Asia.

The Saudi Arabian government owns 70 percent of SABIC shares with the remaining 30 percent publicly traded on the Saudi stock exchange.

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COURTESY

Plastic Tomorrow

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BUSINES NEWS

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Vorwerk selects ELIX 5120 premium ABS-Blend for Thermomix food processor – and awards "A" supplier status to ELIX Polymers

Tarragona, May 2, 2018 – Vorwerk Elektrowerke GmbH has selected ELIX ABS-Blend 5120 for the control panel housing of its new Thermomix TM5 food processor. ABS Blend E.5120 is produced by ELIX Polymers S.L., a leading manufacturer of ABS (Acrylonitrile-Butadiene-Styrene) resins and derivatives in Europe.

The TM5 is a 3-component product with a very complex and demanding injection process. Vorwerk selected the ELIX 5120 ABS-Blend - coloured in a customized grey - because it was able to offer the required high toughness, rigidity, dimensional stability, good heat resistance and high gloss appearance as the key properties. - Impact-resistant ELIX ABS-Blend 5120 not only offers an excellent balance of the required properties, it can also be processed efficiently even in thin wall thicknesses thanks to its optimized flow properties.

Vorwerk awards "A" supplier status to ELIX Polymers S.L. with zero defect rate in 2016

Vorwerk and ELIX Polymers have built a successful partnership over many years, based on supply reliability and the quality of premium engineering thermoplastics of ELIX polymers - used for many quality products in Vorwerk's product portfolio for modern household appliances such as vacuum cleaners. "We have an excellent supplier relationship and consider ELIX Polymers as a valuable and reliable supplier as well as a development partner for sophisticated technical projects and objectives", said Vorwerk's strategic purchasing agent, Carsten Schlegel. Vorwerk has recognised ELIX Polymers as an "A" supplier with a zero defect rate since beginning of the business partnership – and this was confirmed again in October 2017.

"We consider the renewed A-supplier assessment as a confirmation of our company's philosophy of continuous improvement regarding quality and best-in-class service. We are grateful and honoured that Vorwerk considers ELIX Polymers as a preferred supplier for our high-quality ABS", comments Joachim Kroeger, Regional Sales Manager of ELIX Polymers.

Vorwerk has modernized its multifunctional kitchen machine Thermomix with innovative technologies such as recipe chips, touchscreen and guided cooking function. The new Thermomix-model TM5 can be operated intuitively by a touchscreen and just one button. With its innovative recipe chips and a unique guided cooking function, the Thermomix TM5 food processor opens up a new digital dimension of cooking and sets new standards.

Notes for editors

ELIX Polymers - *ELIX Polymers is a leading manufacturer of ABS (Acrylonitrile-Butadiene-Styrene) resins and derivatives in Europe.*

Operating from its head office in Tarragona, Spain, and with Sales support teams in all key markets, the company is a specialist provider of tailor-made solutions for high quality thermoplastics applications. With a 40-year track record, ELIX Polymers is an expert in ABS polymers, and it has the resources, the expertise and the experience to create value for its customers through highly individual solutions.

ELIX Polymers offers a broad range of material solutions for a variety of industries and applications, meeting the stringent requirements of the Healthcare, Automotive, Appliances, Electronic, Toys and other industries.

For more information please visit www.elix-polymers.com.

As per corporate identity, ELIX is written in capitals. Would you be so kind as to use this way of writing when publishing this story? Many thanks.

Vorwerk - *The Vorwerk & Co. KG family enterprise was founded in 1883. The holding company's registered office is located in Wuppertal, Germany. At the head of the corporate group are the Managing Partners Reiner Strecker, Frank van Oers and Rainer Christian Genes. Vorwerk's core business encompasses both the production and sale of high-quality household products (Thermomix kitchen appliance, Kobold vacuum cleaner, Twercs tools, Lux Asia Pacific products) and cosmetics (JAFRA Cosmetics). Here, Vorwerk always seeks direct contact to the customer – be it through direct selling, via its own e-shops or its Vorwerk stores in good inner-city locations. The Vorwerk family also includes the akf bank, Vorwerk flooring and its sister group, HECTAS. Worldwide there are more than 649,000 people working for Vorwerk, some 637,000 of whom are independent advisors. Vorwerk generated consolidated sales of 3.1 billion euros (2016) and operates in more than 70 countries.*

For More Detail :
www.elix-polymers.com

COURTESY

EconCore shines light on successes in continuous thermoplastic honeycomb core production technology at NPE2018

- Versatile technology is applicable across many sectors, automotive interior application developments grow intensively
- Auto parts from new licensee Fynotej debut
- Composite steel/honeycomb truck panels from Wabash on display
- High performance thermoplastic honeycomb cores in advanced development, aircraft and railway interior applications included

Thermoplastic honeycomb core production technology provider EconCore will unveil its latest successes at NPE2018, running from May 7 to 11 in Orlando, FL. The Belgian company, which licenses its ThermHex technology around the world for production of polypropylene (PP) honeycombs and sandwich materials, will also provide information on an elaboration of its process capabilities that enables production of honeycombs in high performance thermoplastics. A further development enables the integrated production of what it terms organosandwich — honeycomb cores with continuous fiber reinforced thermoplastic skins.

After the substantial footprint that EconCore technology established in the automotive industry in Europe and Asia recently, Fynotej, a manufacturer based in Mexico City already well-known for its high-quality automotive non-wovens and industrial carpets, is EconCore's first North American licensee to focus on automotive applications. Several interior parts made from its products will debut on the EconCore booth – S31192 in South Hall Level 1.

Fynotej went into production earlier this year with a range of honeycomb sandwiches for automotive interiors, including the trunk space. These products, PP honeycomb boards branded Fynocore, have a PP honeycomb core with skins – thermally bonded in-line – in either solid PP sheet or also including a non-woven surface finish, combining low weight with high performance and esthetics.

"Fynocore products combine our expertise and experience in non-wovens with EconCore's ThermHex honeycomb technology," says Daniel Kalach, VP of Manufacturing at Fynotej. "They fit very well with automotive market trends: they are recyclable, moisture inert, conversion is clean and fast, parts are high in performance but low in weight, and, most of all, costs are competitive. We are excited to be able to offer these innovative products to our customers throughout North America."

Daniel Kalach says Fynotej is already looking at high-volume non-automotive applications that will also benefit from the performance advantages of PP honeycomb panels. The company is eyeing building and industrial applications in particular. "We are very excited about our honeycomb production line which has now been started up in Mexico City. This highly versatile technology that offers an extensive range of opportunities but most importantly it meets the most critical market needs – performance and cost efficiency" – adds Kalach.

Tomasz Czarnecki, COO at EconCore, says the successful start-up of the Fynotej production line is a significant step forward for lightweight thermoplastics honeycomb composites in the North American automotive sector. "It is one of the latest additions to our network of licensees, which now spans Europe, Asia and North America, covering applications not only in automotive, but – depending on the evolutions, potentially also in commercial transportation, building and construction, reusable industrial packaging and more," he says.

Czarnecki goes on to highlight the success of another EconCore licensee in North America, Wabash National Corp., the region's leading producer of semi-trailer and truck bodies. "The combination of thermoplastic honeycomb core with metal skins is another example of the versatility of the EconCore technology. The light-weighting efforts of Wabash National fit well into the market trends. The transportation and logistics markets, with regards to fuel efficiency regulations but also in view of pure cost savings targeted by fleet managers, are asking for a change."

PP and Beyond

EconCore is now further exploiting the versatility of the ThermHex technology. It has broadened its focus to high-performance thermoplastic (HPT) honeycomb core materials and sandwich panels. "The high speed continuous technology has been proven to be a logical fit for high-volume applications using commodity thermoplastics," says Czarnecki. "Now we are extending its capabilities to produce honeycomb cores in engineering plastics, including modified polycarbonate, polyamide 66, polyphenylene sulfide (PPS) and others."

EconCore has already successfully produced and tested honeycombs in several HPTs at its recently-refurbished R&D facilities in Leuven, Belgium. It will present latest developments in these materials at NPE2018.

HPT honeycombs will build on the intrinsic benefits of lightweight honeycomb structures, adding improved heat resistance (useful for such products as housings for electric vehicle batteries) and very good flame resistance (critical for building panels). EconCore is also working with materials modified for FST (flame, smoke, toxicity) compliance in railway and aerospace applications. It sees substantial potential in photovoltaic (PV) panels and numerous other products too.

EconCore is readying a variant of the ThermHex technology for production of PP honeycomb cores thermally bonded between skins of PP reinforced with continuous glass fibers. These organosandwich materials offer an outstanding ratio of stiffness to weight and can be converted into final parts – also in-line if desired – using such quick and efficient processes as thermoforming and over-molding. Compared to more conventional composite and metal-based solutions, they offer superior light-weighting potential and important cost benefits.

Notes for editors

About EconCore

EconCore, based in Leuven, Belgium, provides technology for the continuous production of honeycomb sandwich materials. The unique ability to produce rigid but lightweight panels within a cost-efficient, integrated high-volume production process is licensed by several companies over the world. The fast, versatile, continuous thermoplastic honeycomb production process allows users to produce sandwich materials for various applications including automotive, transportation, building and construction, industrial packaging/graphical displays, furniture and many others at minimal cost, weight and environmental impact.

How ThermHex works

EconCore's patented technology uses a series of in-line, high-speed, operations to produce honeycomb structures from a single continuous thermoplastic sheet. It involves a sequence of thermoforming, folding and bonding operations, using sheet that can be produced in-line or taken from a roll. ThermHex technology has the potential to work with a wide range of thermoplastic polymers to create honeycombs, whose cell size, density and thickness can be altered with simple hardware and/or process parameter adjustments. The process allows for inline bonding of solid skins to one or both sides of the honeycomb, to create an extremely cost-effective finished composite panel.

ThermHex cores are around 80% lighter than solid thermoplastic cores in use today, in such products as metal skinned- panels for transportation and building applications. The lightweight cores also have positive implications for product handling, raw material inventory, outbound logistics, and installation.

For more information
www.EconCore.com / LinkedIn / Twitter.

COURTESY

FDA Approval for Total Circular Compounds® Containing Recycled HDPE

Brussels, April 18, 2018 - The US Food and Drug Administration has determined that Total's secondary recycling process at its Antwerp Belgium site for the production of High Density Polyethylene (HDPE) Circular Compounds is effective in reducing contaminants from Post-Consumer Recycled HDPE (PCR-HDPE) material to an extent which allows for its use in food packaging.

Consequently, rPE 6306, a Circular Compound containing 50% post-consumer HDPE produced in Antwerp, meets the FDA requirements for use in the production of bottles for milk and juices, meat trays and other food packaging products at room and refrigeration temperatures. In Europe, this recognition paves the way for the use of the grade in demanding applications.

"We had already demonstrated that a compound containing post-consumer HDPE and a specifically developed virgin 'booster' product provides the same or even better performance than conventional virgin product. Now, we are pleased to have received the non-objection letter from the US Food and Drug Administration confirming the success of our efforts in upgrading recyclates. It is a milestone in the approval process. Our development contributes to a Circular Economy by enabling the use of recyclates in more and more applications," stated Jean Viallefont, Vice President Polymers Europe for Total.

Total has also developed a range of polypropylene Circular Compounds with a high content of post-consumer recyclates which match key performance requirements for many applications including crates, caps, bottles and pails.

In addition, Total continues to progress in its effort to industrialize the polystyrene recycling process on its own production lines.

About Total Refining & Chemicals

The Total Polymers Business Unit is based in the Refining & Chemicals division of the Total Group, a leading international oil and gas company and the world's second-ranked solar energy operator with SunPower. Its activities span oil and gas production, refining, petrochemicals and marketing. In the field of polymers, Total combines key areas of expertise in catalysis, processes and products to provide high performance and durable solutions for its customers. With its packaging solutions, Total is committed to contributing to a better world by conserving food, cutting down on waste and reducing its environmental footprint, in line with its commitment to better energy.

www.total.com;
www.polymers.total.com.

COURTESY

Orpic sets a new benchmark - launches a new generation of high quality thermoforming Luban grade

Oman Oil Refineries and Petroleum Industries Company (Orpic) has launched a new thermoforming grade called Luban HP1151K that will increase both productivity and the overall performance of transparent thermoformed cups, trays and containers. The new PolyPropylene thermoforming grade is based on Milliken's nucleating innovation Hyperform® HPN-600ei. The new grade (Luban HP1151K) will be launched during 5th Oman Plast Exhibition 2018 at Oman Convention and Exhibition Centre.

Orpic's Luban HP1151K combines high clarity and aesthetics with a new level of superior dimensional stability for thermoformed products. Luban HP1151K is based on the latest technology available to offer the food packaging and household storage solutions industries a new benchmark in pure, high quality PP.

Apart from being able to increase the number of articles that can be produced, the high quality finished products provide good stacking performance. It also offers a broad processing window that opens up distinct product quality and consistency advantages plus the all-important productivity benefits for converters.

Additionally, the grade delivers optimal environmental and handling-related advantages associated with using lightweight PP compared to other materials.

Gilles Rochas, General Manager – Polymer, Orpic says, "The product has a good resin base and tests conducted so far have been successful. Luban HP1151K reduces haze in the product and increases clarity and gloss. We are confident that upon introduction of Luban HP1151K, this high quality product will offer Oman and the international packaging customers an opportunity to reduce their cycle times and achieve better results through less wastage whilst offering all-round productivity improvements."

Hyperform HPN-600ei also offers good organoleptics with no contamination risk making Luban HP1151K suitable for food applications.

To learn more about this amazing high quality product and see it first-hand, please visit our stand at OmanPlast 2018.

About Orpic:

Orpic (Oman Oil Refineries and Petroleum Industries Company SAOC) is one of Oman's largest companies and one of the most rapidly growing businesses in the Middle East oil industry. Orpic's Refineries in Suhar and Muscat, as well as the Aromatics and Polypropylene Plants in Suhar, provide fuel, chemicals, plastics, and other petroleum products, to Oman and the world. To continue to meet the needs of Oman and international markets, Orpic has undertaking three strategic growth projects [Muscat Suhar Product Pipeline (MSPP - 2017), Sohar Refinery Improvement Project (SRIP - 2016) and Liwa Plastics Industries Complex (LPIC - 2020)], in line with the company's strategy to add value to the Oil and Gas resources of Oman.

For more information,
please visit www.orpic.om.

COURTESY

Mondi's BarrierPack Recyclable wins award, further extends functionality with added gas barrier

BarrierPack Recyclable, Mondi's fully recyclable plastic laminate for pre-made pouches and FFS roll stock, has just been honoured for technological innovation, but the company is not sitting on its laurels. The addition of an extra layer to the construction now provides a gas barrier that greatly extends the material's potential applications.

Vienna, 26 April 2018 – Mondi's award-winning BarrierPack Recyclable laminate is a highly sustainable material with performance properties equivalent to conventional alternatives and fully compatible with existing industrial recycling streams. Now, thanks to a recent innovation, it's suitable for more applications.

The product made its debut only recently but, even so, has already captured the attention of judges for the **2018 Plastics Recycling Europe Awards**, which on April 25 in Amsterdam, named it as the "Best Technology Innovation in Plastics Recycling." This award recognises companies "that have instigated, developed or applied innovative technologies and provide quantifiable benefits in areas such as production efficiency, quality standards, product performance or profitability."

"We believe that BarrierPack Recyclable is a major breakthrough for flexible packaging," said Carl Stonley, Technical Account Manager at Mondi Consumer Goods Packaging, while accepting the award, "It complements the sustainability benefits already offered by flexibles – reduction of food waste, CO2 emissions and energy use – by adding recyclability, something laminates made of different materials cannot offer."

In addition to being fully recyclable, the material offers exceptional mechanical properties and is suitable for a range of packaging style formats. "Constructed using two layers of polyethylene film," Stonley noted, "BarrierPack Recyclable is a highly functional, flexible, packaging material that's easy to open and reclose for consumer convenience."

The material is stiffer, stronger and lighter than a conventional PET/PE laminate of the same thickness and it can be formed directly on form/fill/seal (FFS) machines as well as used for pre-made packaging

The initial moisture barrier provided by BarrierPack Recyclable made it ideal for applications such as dry food, food ingredients, personal care and pet-care applications. But now, with the recent addition of an additional gas barrier layer between the PE layers, the material is also suitable for such uses as modified atmosphere packaging (MAP) for food products.

Mondi developed BarrierPack Recyclable to help address the plastic waste issue and to support the move toward a more circular economy. Industry-wide initiatives are driving development of recyclable packaging to maximise the lifecycle of plastic and reduce its ecological footprint.

"Plastic packaging plays a vital role in protecting products, reducing food waste, and increasing user convenience. Public and industry discussions recognise that more needs to be done to minimise the impact of waste plastics," Stonley explained, "Since flexible packaging is growing in popularity with consumers, BarrierPack helps to address the market's need for sustainable alternatives for flexible laminates by offering full recyclability. This has been validated by extensive trials by CeDo Recycling in the Netherlands, a leader in recycling technologies."

Ton Emans, managing director at CeDo Recycling and president of Plastics Recyclers Europe, said: "Before the European Commission announced a strategy in January 2018 to ensure that all plastics packaging is recyclable by 2030, Mondi had already brought BarrierPack Recyclable to the commercialisation phase. This innovation not only shows that flexible plastic packaging can become truly circular, but also that we can produce, use and recycle it on a large scale. Flexible material designed for recycling is key to enabling circular safeguards of precious resources in Europe."

About Mondi

Mondi is a global leader in packaging and paper, employing around 26,000 people in over 30 countries. We are fully integrated across the packaging and paper value chain - from managing forests and producing pulp, paper and plastic films, to developing and manufacturing effective industrial and consumer packaging solutions. Sustainability is embedded in everything we do, with clearly defined commitments across 10 action areas. We delight our customers with our innovative and sustainable packaging and paper solutions. Our major operations are in central Europe, Russia, North America and South Africa. In 2017, Mondi had revenues of €7.1 billion and a return on capital employed of 19.7%.

Mondi has a dual listed company structure, with a primary listing on the JSE Limited for Mondi Limited under the ticker MND and a premium listing on the London Stock Exchange for Mondi plc, under the ticker MNDI. We are a FTSE 100 constituent, and have been included in the FTSE4Good Index Series since 2008 and the JSE's Socially Responsible Investment (SRI) Index since 2007.

www.mondigroup.com
linkedin.com/company/mondi-group

COURTESY

Next generation of in-panel temperature controllers

Speed installation with artificial intelligence

Following the launch of the E5_D series in April 2017, Omron continues to expand its Temperature controller portfolio with the introduction of the new NX-TC series with Artificial Intelligence (AI). Designed for multi-loop applications, these intelligent controllers provide easier in-panel installation.

Omron released its first In-panel temperature controllers, the E5ZN series (2 loops in 22,5 mm width), in 2001.These were, followed by the EJ1N series (4 loops in 31 mm width) in 2006, which further enhanced control performances and space saving. The latest addition to the NX-TC series is a new generation of smart devices that are designed to achieve optimal and automatic temperature control without human intervention. In fact, from now on all adjustments typically made in the field by experts will be automated using Artificial Intelligence.

Adaptive control algorithm

With standard temperature controllers, it can take a long time to define initial start-up PID settings. And it can be even more challenging to make optimal adjustments without many years of experience in this area. That is why Omron developed the NX-TC Series with "adaptive control technology". This automatically detects changes in the process under control and adapts the PID accordingly. The result? A perfectly tuned PID algorithm and ultra-stable temperature control.

Perfect sealing temperature control for packaging machines

On a conventional sealing machine, temperature sensors are often located too far from the sealing surface of the heating bar. This can cause a difference between the temperature of the sealing surface and the actual control temperature. The temperature difference and the resulting number or sealing failures increase as packaging speed accelerates, and directly in correlation with thinner packaging materials.

The NX-TC series solves this issue using the following approach:

- Special temperature sensor models with faster detection allow the sensor to be placed closer to the sealing surface.
- Specially developed embedded algorithms such as automatic filter adjustment, help to suppress temperature variations, resulting in a better sealing quality.

Minimizing temperature variations in molding machines

For water-cooled extrusion molding machines, increasing the throughput speed often leads to temperature variations due to various factors such as the extrusion material compound and the cooling water. For a human operator, this means having to make repeated valve adjustments to stabilize the product quality. This is very difficult to achieve in high speed production while also maintaining the quality. Not anymore! The NX-TC has a water-cooling output adjustment function that keeps temperature variations to a minimum, increasing production capacity while maintaining quality.

Characteristics

- Available in two sizes: NX-TC2 (2 loops model in 12 mm width) and NX-TC3 (4 loops model in 24 mm width)
- Universal input for t/c and Pt100 sensors (K, J, T, E, L, U, N, R,S, B, C/W, PL II, Pt100/JPt100).
- Control output type: Voltage output (PNP 24 VDC/21 mA/point), Linear current output (0/4..20 mA)
- Control method: heating and/or cooling (model dependent)
- Load/SSR diagnostic available (model dependent)
- Fieldbus connection: Ethernet IP and EtherCAT (using communication coupler)

About Omron

Omron Corporation is a leading industrial automation company that leverages its core sensing & control technologies to expand into businesses, such as control components, electronic components, automotive electronic components, social infrastructure, healthcare, and the environment. Omron was established in 1933, and has around 36,000 global employees, offering products and services in over 117 nations and regions. In the industrial automation business, Omron is contributing to making an affluent society by offering automation technologies which drive innovation in manufacturing as well as products and customer support.

For more detail-

industrial.omron.eu.

COURTESY

Cosmo Films Limited

Consolidated Results

In Rs. crore	Q4 FY18	Q4 FY17	FY18	FY17
Net Revenue	527.1	469.6	1966.7	1696.3
EBITDA	43.9	44.0	167.6	169.2
PAT	25.1	27.8	64.4	85.7
EPS (in Rs.)	13.1	14.5	33.6	44.7

New Delhi, May 24th , 2018: Cosmo Films Limited, a global leader infilms for packaging, labelling & lamination applications and synthetic paper today declared its financial results for the quarter ended March 31, 2018.

In Q4 FY18, the Company achieved the highest ever quarterly sales volume (up 14% YoY) primarily on the back of near to full capacity utilization of the BOPP line commissioned in February 2017. Commodity film margins remained subdued negating the favourable impact of volume increase.

For the full year, sales volume grew by 25% but lower commodity films margins wiped out more than whole of the gains of the volume increase PAT and EPS dropped further due to higher interest and depreciation of the new BOPP line commissioned last year. One-time tax reversal due to recent change in Income Tax Act enabled to partially mitigate the drop in PAT and EPS.

Commenting on the financial performance of the company **Mr. Pankaj Poddar, CEO, Cosmo Films Ltd.** said, *"We continue to focus on expanding specialty which has grown by 20% YoY and full utilization of capacity. While BOPP film margins continued to be volatile , our continuous focus on improving operational efficiencies helped in maintaining EBIDTA level."*

About Cosmo Films Limited

Established in 1981, Cosmo Films Limited today is a global leader in speciality films for packaging, lamination and labeling applications. Its films offerings include biaxially oriented polypropylene (BOPP) films, cast polypropylene (CPP) films and soon to be offered biaxially oriented polyethylene terephthalate (BOPET) films. Today, the company is the largest exporter of BOPP films from India and is also the largest producer of thermal laminating films in the world with plant cum distribution centres in the U.S, Korea & Japan and global channel partners in more than seventy countries.

Clariant shows its full spectrum of pigments and dispersions at FESPA 2018 global print expo

- **Range comprises dedicated products for inkjet and toner applications for non-impact printing**
- **New pigments introduced to expand color gamut**

Muttenz, May 15, 2018 – Clariant, a leader in specialty chemicals, is taking space at FESPA 2018 in Berlin on May 15-18 to show how its growing range of pigments, dyes and pigment preparations for inks and toners meets developing needs of customers in the digital print industry. FESPA is Europe's largest exhibition for the digital wide-format and graphic print industry, and Clariant will be on booth A39 in hall 3.1.

The company will premier new pigments for inkjet inks and will also highlight the support it provides to customers in regulatory compliance.

Clariant already offers many solutions for making inkjet inks and prints more colorful, but now it is broadening its palette with two new products, Ink Jet Magenta E-S VP6057 and Ink Jet Orange GR VP6102. As their names indicate, both are pigments for use in inkjet inks. They can be used in water-, solvent- and UV-based inks. Both pigments have excellent light- and weather-fastness properties, meaning they can be used in a wide variety of applications outdoors as well as indoors. Both also have low cation contents needed for high ink stability and reliable print performance.

Ink Jet Magenta E-S VP6057 is a blue shade magenta with excellent flow properties and long-term viscosity stability. It is characterized by very good transparency, very small particles and narrow particle size distribution. The combination of its very good flow properties and brilliant shade (high chroma) make it superior to other common PR122 grades (quinacridone pigments) currently available on the market.

Ink Jet Orange GR VP6102 is unique in that it is the only Pigment Orange 43 grade pigment commercially available that has been designed specifically for digital inks. It exhibits one of the most brilliant orange shades of all orange pigments.

"The traditional CMYK four color system (cyan, magenta, yellow, black) has certain restrictions regarding color gamut, which is why more color pigments for printing are now trending," says Rüdiger Baur, Head of Global TM NIP & Color Filter, BU Pigments at Clariant. "Expanding the gamut with additional colors – orange and also green and violet – is gaining more attention, especially in graphic arts (flyers, brochures) and packaging (labels, food boxes)."

During the show, Clariant will provide visitors with information on its wide range of existing solutions for digital package printing, including pigments not only for inks but also for liquid toners for labels and packaging. In addition, it will show color solutions for short-run digital publication printing. Clariant produces the full range of process colors as well as shading colors.

"Clariant is present in markets all around the world with a dedicated product range for different aspects of non-impact printing," says Christian Zeh, Senior Technical Manager, BU Pigments at Clariant. "That means pigments and dyes, including Duasyn SF (salt free) purified inkjet grades, Hostacopy and Hostajet preparations, Charge Control Agents (CCAs) and – in selected regions – pyrogenic silica for toner.

"In fact, Clariant has one of the widest ranges of colorants and dispersions for inkjet printing. We develop our products according to current and future market needs, enabling our customers to manufacture state-of-the-art inkjet inks, and to ultimately deliver the constant innovation expected by end-users and consumers."

Clariant is a globally leading specialty chemicals company, based in Muttenz near Basel/Switzerland. On 31 December 2017 the company employed a total workforce of 18 135. In the financial year 2017, Clariant recorded sales of CHF 6.377 billion for its continuing businesses. The company reports in four business areas: Care Chemicals, Catalysis, Natural Resources, and Plastics & Coatings. Clariant's corporate strategy is based on five pillars: focus on innovation through R&D, add value with sustainability, reposition portfolio, intensify growth, and increase profitability.

www.clariant.com

COURTESY

SWACHCH BHARAT THROUGH PLASTICS WASTE MANAGEMENT

Anup Patel M.D.
Dollplast Machinery Inc.

Plastics Age Will Never End " Burning Problem of Plastic Waste " & It's Solution

Plastics has now become an integral part of human life and one cannot out rule out the advantages of plastics but the disadvantages can also be reduced to some extent if certain tips todeal with plastic waste are followed by Industry, Common Man, Municipal and other Authorities concerned with the environment. Plastics has many negative effects on the environment. These include littering of the landscape, that is, once used, plastics becomes litter and finds its way intoWaterways, Parks, Beaches, and Streets. Indeed, Plastic Bags have become popular as they fly and get captured on fences, trees and other vegetation. If burned, they infuse the air with toxic fumes which contain chemicals, including dioxins, which have been linked with cancer as well as the increase of green house gases (GHG). The vast majority destined to end up in the environment are clogging of sewers, drains and polluting soil,

Plastics are a threat to aquatic life and livestock. Many animals ingest plastic bags, mistaking them for food, and therefore die. Ingested plastic bags remain intact even after the death and decomposition of the animal. Thus, it lies around in the landscape where another victim may ingest it and die.

The present consumption of Plastics in our country is around 12.0 MMT and the per capitaconsumption is around 10 kgs. The Plastics consumption is likely to increase to 20.0 MMT by 2020 and the per capita consumption is going to be triple in the next decade. India is surging upwardly and it will become the fifth largest consumer by 2025. Therefore, the consumption of Plastics in huge quantity in the coming decade is also likely to generate huge quantity of Plastics Waste. At present India generates around 6 MMT of Plastics Waste annually. About 60 percent of the total waste is recycled and the rest is scattered on the roads, open areas, gutter lines, rivers, parks, beaches etc.

Various Policy measures are being taken to check the nuisance caused by Plastic Waste in India, though there is no definite policy and legislation framed in respect of mitigating the Plastic Waste in the country. Our Hon'ble Prime Minister Shri. Narendrabhai Modi has invited renowned Persons from the Society to join hands for Swachchata Abhiyan in making Swachch Bharat with respect to Plastic Waste.

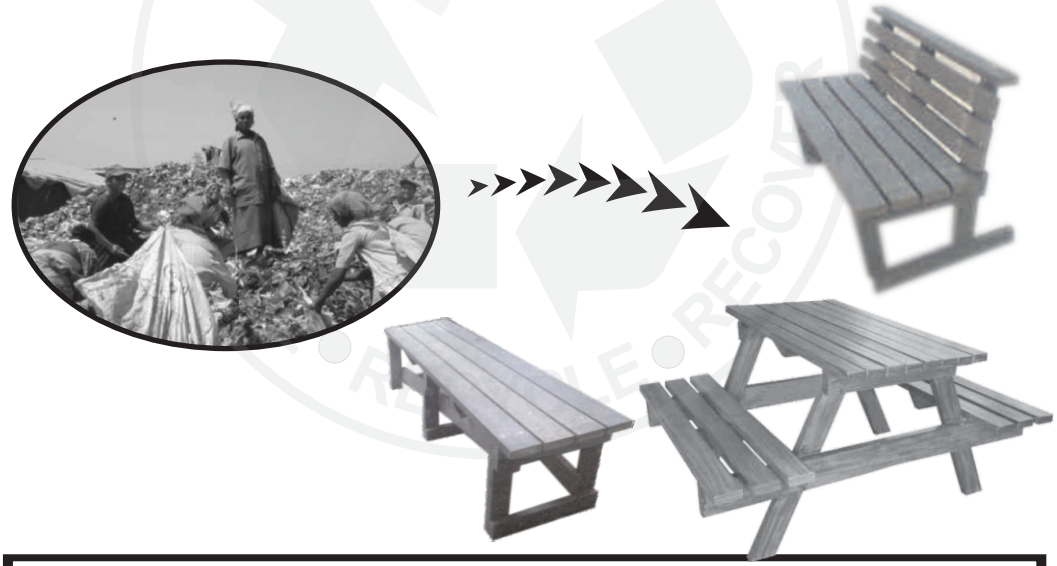
We all can make Bharat Swachch provided we all follow some basic norms. The present trend followed is to collect plastics waste generated by Common Man or Industry to Trading and than reprocess by traditional methods into useful products, thereby supplementing the supply of raw materials at economic price. There is a need for an act by the concerned authorities to envisages prohibition of throwing or depositing plastic articles in public places and to facilitate the collection through garbage placed at convenient places.

The time has come when every citizen is supposed to throw/dump Plastics Waste at such a place notified by the Society, Organisation or Authority so that it can be collected by an agency identified by the society or Regulatory Body. The Waste collected from one source should then be sent for recycling. Shree Anup Patel Managing Director of M/s. Dollplast Machinery Inc. Ahmedabad, Gujarat, INDIA has developed New Technology For the First time in the Country to recycle Plastic Waste Containing all the Polymers into Lumbers which can be fabricated into valuable Products like Doors, Windows, Furniture, Pallets, Tree Guards, fencing etc. from the Zero Value Plastics Waste. For this New Technology Development M/s. DOLLPLAST has received following Awards from Govt. of India & Other Leading Private Organisation.

SWACHCH BHARAT THROUGH PLASTICS WASTE MANAGEMENT

(1) Plasticon Award 2005" for Innovation in Recycling Technology
(2) National Award 2011 (Govt.of India) (with Rs.2.00 Lac)
(Innovation in Plastic waste management Machinery)
(3) National Award 2011 (Govt.of India) (with Rs.2.00 Lac)
(Plastic waste Process & Technology Innovation)
(4) Plasticon Award 2012 (Gold Trophy) (Excellent Innovation in Recycling Technology)
(5) Sujana Excellence Award 2012 (with Rs.1.00 Lac)(Innovation in Engineering)
(6) Top SME - 100 Fore Small & Medium Enterprise (2013)

All Municipal Corporations, Grampanchayat, Environment Authorities etc should come forward to see that all the Plastics Waste is collected at one source and transported to Recyclers who will be in position to recycle it and use the waste for better purpose. There is a need to think in this direction by all the Authorities to make our Bharat Swachch as desired by our Hon'ble Prime Minister of India. We have accept that today we cannot live without Plastics. Sheer banning the use of Plastics may not help or just condemning Plastics is not the solution. All citizens must come forward to see that all Plastics Waste is collected at one source that is in Society, Residential area, Hospitals, Railway/Bus Stations, Airports, Offices, Parks etc. and make sure that this is sent to recyclers for recycling which will defiantly make our Cities/Towns and Areas are neat, Clean and Green. So Join in this Abhiyan to Make our Bharat Swachch.



Controllers For Metal Cutting

CNC Milling Controller

M6X8 Series
10.4" Display
Maximum 6 Axis

M5X8 Series
8.4" Display
Maximum 6 Axis

Controller For Injection Machine

Can Support Servo Valves with Closed Loop PID Control for MOOG, BOSCH, VICKERS etc.
All Electric Machines.

IN2000
It has all.
A Perfect Budget

IN6800
For Std Injection Molding Machines

Controllers For Servo Robots

R6000
For Servo Robots
8.4" Display
Waterproof & DustProof

R6800
For 6 Axis Servo Robots.
7" Display

CNC Lathe Controller

T5X8 Series
8.4" Display
Max 6 Axis

Controller for All Electric IMM

IN7800 Series
Controller for All Electric Injection Molding

ES200-Energy Saving Servo Packs

ES200 Energy Saving Servo Pump Packs use PM Servo Motors with Internal Gear Pumps & are controlled with Servo Drives in closed loop control system to achieve energy savings of 40% ~ 70% in Injection & Blow Molding Machines.
Different Customized combinations are available from 20lpm to 300lpm depending upon the machine.

We also offer complete retrofitment solutions for any brand of machines.

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2. IMM RETROFIT & SERVO CONVERSION.
3. ROBOT RETROFIT.

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Website: www.seagulltec.co.in

FORTH COMING EVENTS

PLAST BENGAL	KOLKATA	13 TO 15 JULY-2018
IPLEX-18	HYDERABAD	3RD TO 6TH AUGUST-2018
INDPLAS'18	KOLKATA	30TH NOV TO 3RD DEC-201
PLAST SHOW	RAJKOT	16TH DEC TO 19TH DEC-
PLEXPO-2019	MUMBAI	17TH TO 20TH 2018 JANUARY=2019
INDIAPLAST	NODIA	28TH TO 4TH MARCH-2019
PLASTI WORLD	DELHI (PRAGATIMAIDAN)	5TH TO 8TH MARCH-2019
PLASTI VISION-2020	MUMBAI	16TH TO 20TH JANUARY-2020

PLASTICS है FANTATIC

प्लास्टिक्स हमारी दुनिया है
प्लास्टिक्स ही हमारा व्यापार है
पंचत्त्व के बाद सृष्टि को
मिला यह अनुपम उपहार है ॥1॥

Anil Mandhania
President : PEA (I)
(M) : +91 - 98240 26487

कभी काच सा यह पारदर्शी
कभी रंग-बिरंगी बहार है
ठोस भी है धातु जैसा
इसमें लचीलापन, कम भार है ॥2॥

कार्बन, हाइड्रोजन हैं मुख्य अंश
Polymers के ढेरों प्रकार है
थर्मोप्लास्टिक और थर्मोसेटिंग
दो तत्त्वों ये संसार है ॥3॥

H.D.P.E., P.P., P.V.C.,PET
हर जुबाँ पे शब्द सवार हैं
Injection, Extrusion, Blow Moulding
Processing के विविध प्रकार हैं ॥4॥

घर, ओफिस, वाहन उद्योग
प्लास्टिक्स हर जगह बेशुमार है
पल-पल, पग-पग काम आये
इसके महत्त्व से किसे ईनकार है ॥5॥

जीवन सरल बनाने में
प्लास्टिक्स का अहम किरदार है
स्वर्णिम जवानी इसमें बिता दी
ये हमारा श्रम-साधित संसार है ॥6॥

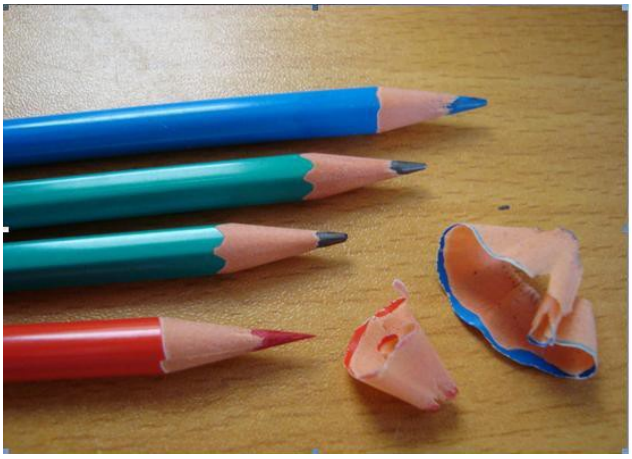
ढालने में कम ऊर्जा लगे
प्राकृतिक संपदा का भी बचाव हैं
जगह-जगह लकडी की जगह ली,
वन-वृक्षो का तारण हार है ॥7॥

प्लास्टिक्स कुदरत का एक चमत्कार है
हमें इससे बेहद-बेहद प्यार हैं
इसकी महत्ता को पहचान लो अब
गर करना देश का उद्धार है ॥8॥

Polymer Pencil Making

KAMAL SHAH

We try to present the items that are relatively new for INDIA, in particular the product presented vide this issue, have huge export potential. Invest one rupee in manufacturing and get three out at least post all expenses! Is that not nice enough?



Why make Polymer pencils?

1) Uses Re-cycled Plastic.
2) This pencil making makes Printing absolutely obsolete. NOT NEEDED, Eliminating toxins.
3) Saves a lot of WOOD.
4) Low cost pencil making in fact.

Most important data: Pencil raw material cost: Rs 1 per Pc.

The conversion cost works out to be Rs 0.464 [100 HP connected load + Land + building +machineries+ Interest on working capital cost + labor + Power + All Misc expenses apportioned per pencil, No of days per year 312 and no of hours per day 20 as assumed]

At this rate profit possibility as below.

Profit per year If sold in INDIA	43142078	
Profit per year if exported		71222078

312 days, 20 Hours' operation.

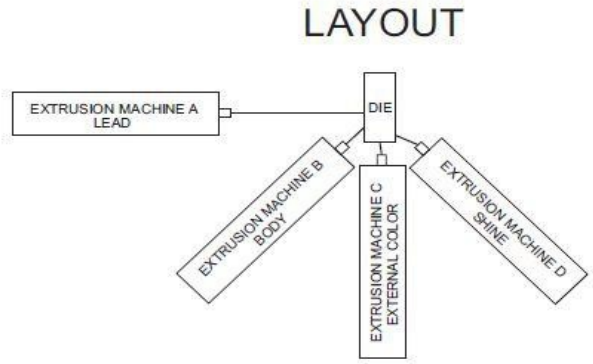
Polymer Pencil Making

Investment in the project:

Investment in the project	
Machinery cost	18987150
Land+ Building assumed at	5000000
Utilities	4000000
Total Rs. At 1 USD = Rs 65	2,79,87,150/-
Working capital provided for.	3348000

How is this made?

As against cumbersome process of Wooden pencil making, the polymer pencil is made simply through extrusion process as below.



NO necessarily Shining be applied always; but in case of needing to export to richer countries (in fact paying countries), need this shining. Meaning to say, we can avoid this additional extrusion process.

========= Why
make in INDIA?

HUGE EXPORT POTENTIAL. Huge
INDIAN replacement market.
Few Players World Over and almost none in INDIA.
Option to wood pencil.
Stronger.

No risk of getting wet, no effect of water on it.
Nice color effects possible without printing.
Can be cheaper.

All the figures are indicative and can change on the date of discussions.

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kamal@positiveaggression.in 0091 9879552875 / 0091 9624112091
0086 13262973406 (China Unicom)

The Author, based at Ahmedabad, is a Professional consultant assisting to set up Lucrative / new projects.

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 ?

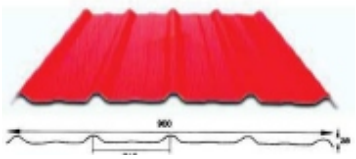
પ્લાસ્ટિક :-

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 પ્લાસ્કિટના 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.

પ્લાસ્કિની 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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લેખક, અમદાવાદ સ્થિત કંસલટંટ છે, જે નવા પ્રોજેક્ટ સ્થાપિત કરવા માટે સલાહ સૂચન આપે છે.

E-Waste Recycling

landfill space, and creating jobs.

The best way to treat e-waste is to recycle it properly. This helps to reintroduce valuable material into the economic cycle and also to reduce the scrap quantity to be land filled or incinerated.

E-waste comprises many different components and requires specialised equipment to dismantle, shred, process and extract the constituent materials that can then be turned into new products. This has to be performed within a controlled system to prevent pollution and ensure workplace safety and health.

Recovered items from e waste after manual dis-assembly– Plastics, Cables, Aluminum, and Steel.

E-Waste recycling process

E-waste or electronics recycling is the process of recovering material from old devices to use in new products.

Electronics recycling can be challenging because discarded electronics devices are sophisticated devices manufactured from varying proportions of glass, metals, and plastics.

The process of recycling can vary, depending upon materials being recycled and the technologies employed, but here is a general overview.

Collection and Transportation:

Collection and transportation are two of the initial stages of the recycling process or e-waste. Recyclers place collection bins or electronics take-back stations in specific locations and transport the collected e-waste from these sites to recycling plants and facilities.

Shredding, Sorting, and Separation:

After collection and transportation to recycling facilities, materials in the e-waste stream must be processed and separated into clean commodities that can be used to make new products.

Efficient separation of materials is the key factor of electronics recycling. Components containing hazardous substances like batteries, capacitors etc. do not get destroyed substantially, these hazardous items can be manually removed after shredding. Only special components like LCD displays or glass tubes from TV's etc. must be removed in advance. In combination with manual sorting the large sized material fractions can be sorted to valuable commodities with best revenues.

Initial shredding of e-waste stream facilitates sorting and separation of plastics from metals and internal circuitry. So, e-waste items are shredded into pieces to prepare for further sorting.

At the shredding stage the metal parts are separated by magnets and eddy current separators. With manual sorting the material is further processed into end products. In the individual separation stages, various pneumatic, magnetic and electrostatic separation processes are used and adjusted to the individual input fractions, in order to obtain optimum results and high product purities.

Further mechanical processing separates aluminum, copper and circuit boards from the material stream which now is mostly plastic.

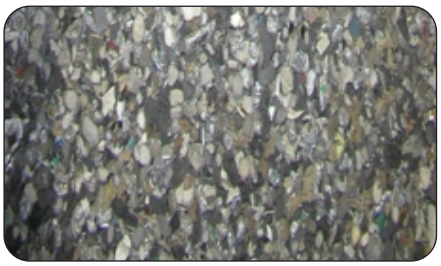
Then, a water separation technology is used to separate glass from plastics.

Visual inspection and hand sorting improve the quality of extracted materials.

The separated streams of aluminum, copper and circuit boards are collected and prepared for sale as recycled commodity materials. Advanced separation technologies are used in the process.

Preparation For Sale as Recycled Materials:

After the shredding, sorting and separation stages have been executed, the separated materials are prepared for sale as usable raw materials for the production of new electronics or other products.



Plastics recovered after recycling

Opportunities in E-waste Recycling

In India – e waste recycling is still in very infant stage & also very much with unorganised sector, following areas can be considered as potential areas of business opportunities / involvements to bring it to main stream / organised sector:

Collection Depots: The physical flow of electronics scrap starts with authorized collection depots. These depots also act as bottle and beverage can return centres, which generate much more business than the e-scrap side of the operation. This reason, one low-cost way to potentially get into e-recycling might be a collection site.

Consolidation Points: Consolidation points are a common tactic in the world of logistics. They allow less than truck load accumulations to be combined into full truck loads to provide transportation efficiencies. The next stop after the collection depot is the consolidation points. At these locations, different products are scaled and cross-docked to create full, uniform loads to send to the recycler. Collectors are paid for their services by end processors, based on that scaled weight. The big way to involve for a company interested in this type of consolidation business.

Primary Recycling: At recycling company, incoming products are identified and weighed. Depending on the type of material, it goes through a manual separation process, or a combination of manual and mechanical separation. At such processing sites maximum % of incoming material is recovered, with possibly intension of zero material sent to the landfill. The result is the liberation of clean material that is subsequently sent to other processors.

Secondary Processing: Clean material is then sent to other operations for further processing.

E-Waste Recycling

Some of that material, such as copper, may generate revenue for the recycler, while other material, such as glass, the recycler will have to pay to have properly processed. One approach to the further liberation of materials is the use of shredding machinery, which tears apart electronic scrap to facilitate liberation of materials. Material extraction is aided by a number of sorting technologies including magnets, vibration, optical devices and eddy currents.

Electronics recycling is definitely a growing industry, but as in many other industries, managing regulatory requirements is increasingly becoming one of the keys to success.

Challenges for E-waste Recycling

The E-waste recycling industry has a significant number of challenges & numerous obstacles have been identified by developing countries in regard to their ability to manage e-wastes in an environmentally sound way.

These include :

- lack of easily accessible information (on flows, quantities, available technology, strict standards for minimization and re-use, recycling and recovery)
- lack of trained personnel; inadequate legislations
- inadequate infrastructure for collection, recycling and recovery
- lack of public awareness
- lack of economic alternatives to activities carried out by the informal sector and small family repair shops.

IMPORTS FROM DEVELOPED NATIONS

Importing e-waste, including hazardous and toxic materials, is leading to serious health hazards for the workers working for dismantling electronic devices without adequate environmental controls. Currently, approximately - 30-50 percent of e-waste that recyclers collect is imported from overseas, including illegally imported e-scrap, which is of particular concern.

LESS VALUABLE MATERIALS

Although the volume of e-waste is increasing rapidly, the quality of e-waste is decreasing. Devices are getting smaller and smaller containing less precious metal. The material values of many end-of-life electronic and electrical devices have therefore fallen sharply.

Electronics recyclers have also suffered due to dropping of global prices of recycled commodities, which have decreased margins and resulted in business closures.

Electronics are not designed for recycling and reuse –

Many products continue to be designed in ways that they are not easily recyclable, repairable or reusable.

Most E-waste still goes to landfills –

The current rate or level of e-waste recycling is definitely very very low / not sufficient. The current recycling low rate has much room for improvement as most e-waste still is going to the landfill.

Conclusion

The challenges of managing E-waste in India are very different from those in other countries, both the developed and developing. No doubt, there can be several shared lessons; the complexity of the E-waste issue in India, given its vast geographical and cultural diversity and economic disparities, makes WEEE management challenges quite unique.

A few of these are: Rapidly increasing E-waste volumes, both domestically generated as well as through imports. Imports are often labelled as second-hand computer donations. No accurate estimates of the quantity of E-waste generated and recycled.

Low level of awareness amongst manufacturers and consumers of the hazards of incorrect E-waste disposal.

Widespread E-waste recycling in the informal sector using crude techniques. E-waste workers have little or no knowledge of toxins in E-waste, and are exposed to serious health hazards. Inefficient recycling processes result in substantial losses of material value.

The major problem we face in India there is no such technology or clear policy/guidelines to check the disposal of e-waste. E-waste is mostly recycled by backyard practitioners.

Recycling of e-waste: Recycling WEEE is an important subject not only from the view point of waste treatment but also in terms of recovery of valuable waste materials. Mechanical/physical processing provides an alternative means of recovering valuable materials but several difficulties exist. The main difficulty, industries have to afford is the separation of the different material in WEEE. This problem leads to several approaches to optimize the process.

One of the most successful is the definition of separation systems based on the physical – chemical properties of materials to make recycling of material constituting WEEE economically profitable. Lots of different types of plastics in e-waste obtained from computer bodies and computer monitors.

The recycling of this plastic waste generally involves low level processing such as granulation or pelletization followed by melt or partial melt and extrusion to form the end product. E-plastic waste rather difficult to recycle: Because of diversity of polymeric materials used. E. g thermoplastics as well as thermosets and relatively high levels of flame retardants added during production. Thermosets polymer cannot be remoulded or reprocessed by remelting. Thermosets composite contain high amount of inorganic glass reinforcement or mineral filler. Fire retardants are used with-plastic material in order to increase fire safety when generates toxic substance during combustion. The miniaturization of electronic equipment reduces the volume of waste make collection, repair and recycling more difficult.

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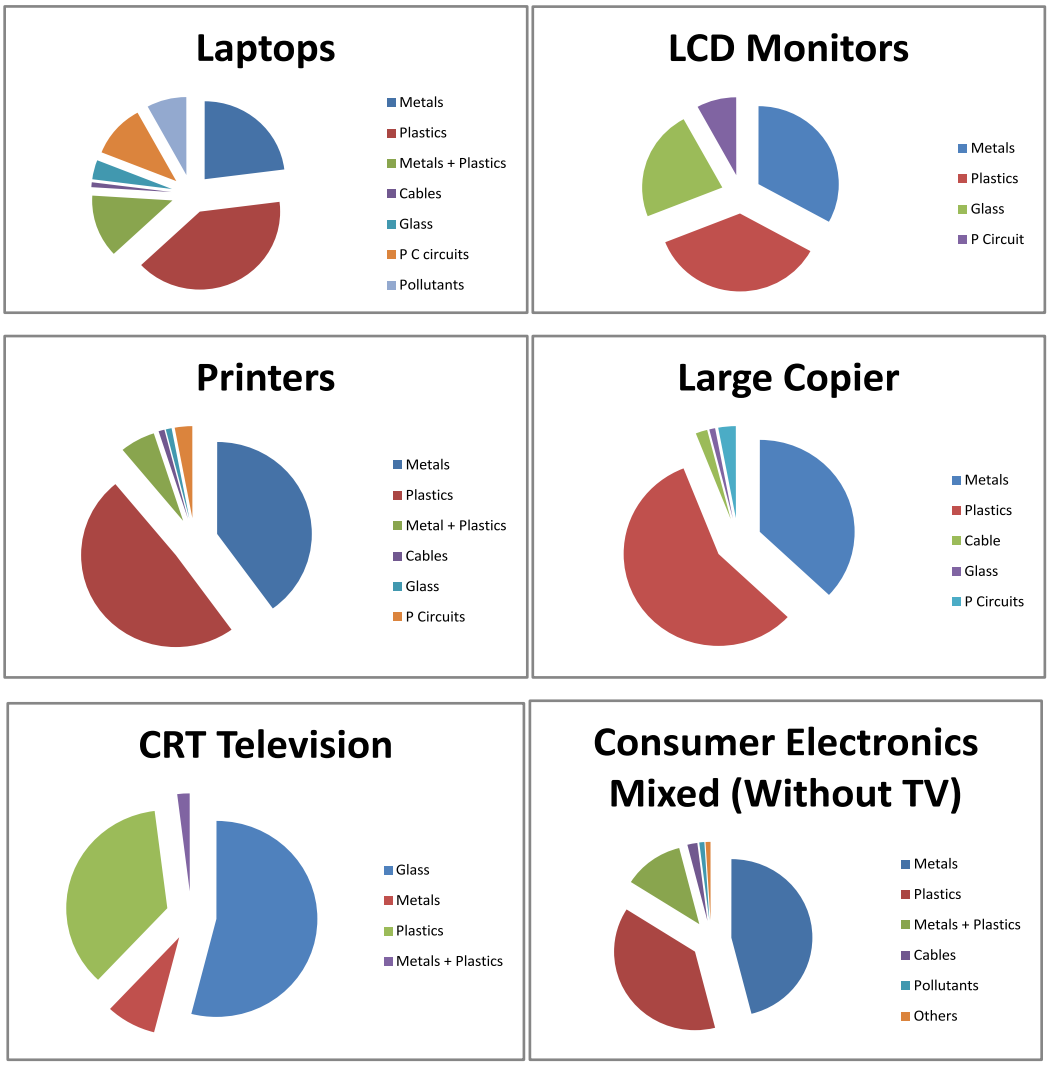
General Material Compositions from different WEEE



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Exposed to the best of the technologies around the world in the various fields / levels of Plastics & Plastics Recycling – Presently helping industries around the world for starting NEW projects & solving the problems of running industries. Helping industries to implement latest technologies & increase the productivity.

Helping Plastics & Recycling industry to grow.

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અનેક સમસ્યા વચ્ચે પીસાઈ રહેલે પ્લાસ્ટીક ઈન્ડસ્ટ્રીઝ

પ્લાસ્ટીક પ્રોડક્ટસ માટે ભારત વિશ્વમાં ઘણા ક્રમાક ધરાવે છે.સમગ્ર દેશમાં આ ક્ષેત્ર માં ઘણા એકમો આવેલા છે. તદ્ ઉપરાંત પ્લાસ્ટીકનો ઉપયોગ આજે મોટા ભાગની ઈન્ડસ્ટ્રીઝ વિવિધ ક્ષેત્રે કાર્યરત છે. ગુજરાતની વાત કરીએ તો આ ક્ષેત્રમાં ગુજરાત રાજયનો સિંહ ફાળો છે. જેમ કે અણદાવાદ, વડોદરા, હાલોલ, વાપી, વલસાડ,, દમન, સીલ્વાસા, સારીગામ, રાજકોટ, સુરત જેવા વિસ્તારો પ્લાસ્ટીક ઉદ્યોગનાં મહત્વના કેન્દ્ર છે. એક અંદાજ મુજબ વડોદરા, અમદાવાદ, હાલોલ, વાપી, વલસાડ વગેરે માં મોટી સંખ્યામાં એકમો કાર્યરત છે. જેમ કે મશીનરીની બનાવટ, રો મટીરીયલ તેમજ મોલ્ડીંગ પ્રોડક્ટસ બનાવનારા ઉદ્યોગો ફેલાયેલા છે. સમગ્ર દેશમાં ફેલાયેલ પ્લાસ્ટીક ઉદ્યોગ હાલ કઠીન સંજોગોમાંથી પસાર થઈ રહ્યો છે. એકાદ બે નહી બલ્કે અનેક સમસ્યાઓને કારણે આ ઉદ્યોગ મૂરઝાઈ રહ્યો છે. દેશમાં હાલમાં ઓદ્યોગીક ક્ષેત્રે લાબા સમયથી મંદીના કારણે મોટો માર સહન કરી રહ્યો છે. વધતા ઉત્પાદન ખર્ચ, વધતા કાચા માલનો ભાવ અને વપરાસ કરનાર ગ્રાહકો દ્વારા ભાવ વધારો નહી આપવા વિરોધ વચ્ચે હાલમાં સમગ્ર દેશમાં કરોડોના પ્લાસ્ટીકના ઉદ્યોગની હાલત સુકા ઝાડ જેવી દુકાળગ્રસ્ત જેવી હાલતમાં પીસાઈ રહી છે.

પ્લાસ્ટીક ઉદ્યોગમાં ચાલી રહેલી મંદીના કારણે તેમજ સતત ભાવ વધારા વચ્ચે મોટા ભાગના કારખાના મરવાના વાંકે જીવી રહ્યા છે. મશીનરી બનાવટના સેક્ટરની ઈન્ડસ્ટ્રીના અગ્રણીઓને ડર છે કે બજારમાં જ્યારે માંગમાં વધારો થશે ત્યારે કેટલી ઈન્ડસ્ટ્રીઓ કાર્યરત હશે. પ્લાસટીક હાલમાં દરેક ક્ષેત્રોમાં જેમ કે ઓટોમોબાઈલ ક્ષેત્રે, ટેક્ષ સ્ટાઈલ ક્ષેત્રે, ઓટો પાટર્સ, મશીનરી, મત્સ્ય ઉદ્યોગ, ઈલેકટ્રીકલ ઉપકરણો વગેરે જેવા ઉદ્યોગોમાં માંગ ઘટતા પ્લાસ્ટીકના માલના વેચાણને સીધો માર પડ્યો છે. આ ઓછુ હોય તેમ ત્યાં ઉત્પાદન ખર્ચ વધતાં દુકાળમાં અધિક માસ જેવી પરીસ્થિતી સર્જાઈ છે. પ્લાસ્ટીક ઈન્ડસ્ટ્રીઝના વેપારીઓના જણાવ્યા પ્રમાણે કાચા માલના ભાવમાં સતત વધારો રહ્યો છે. છેલ્લા અમુક સમયથી કાચામાલના ભાવમાંઅદાજે ૯૫ % વધારો થયો છે. આ ઉપરાંત મોટા ભાગે મશીનરી મોઘી થઈ રહી છે. કારીગરોની અછત, વીજળી ખર્ચમાં ખાસ્સો વધારો થઈ રહ્યો છે. આ બધુ ઓછુ, હોય એમાં કેન્દ્ર સરકાર કે રાજય સરકાર ના નિયમો ની ઘણી સમસ્યાઓનો સામનો કરવો પડે છે. ભારતમાં પ્લાસ્ટીક ઉત્પાદનમાં ૩૫% મોટા એકમોનો હિસ્સો રહેલો છે. જ્યારે મધ્યમ અને નાના એકમોનો ૬૫% હિસ્સો હોય છે.

ઈન્ડસ્ટ્રીઝ માં ટકી રહેવા માટે અને મંદીના મોહોલ વચ્ચે ઉત્પાદન જારી રાખવા માટે પ્લાસ્ટીક ઈન્ડસ્ટ્રઝના વેપારીઓને સરકારના ટેકાની જરૂર હોય છે. ઓછી માંગ વધતા બાબતને કારણે એમનીના નાણાંકીય હાલત ઘણી નાજુક થઈ ગઈ છે. આ દરમ્યાન મજુરોના વધતા પગાર વધારાને કારણે કારીગરની અછત જોવા મળી રહી છે. આ ઉદ્યોગ માટે હાલનો સમય ખરેખર ઘણો કપરો સમયમાંથી પસાર થઈ રહ્યો છે. સરકારે ગ્લોબલી વિચારવાની જરૂર છે. તોજ આ ઈન્ડસ્ટ્રીઝ આગળ જતા બચીસકે. ૪૦ (ચાલીસ) માયક્રોન નો કાયદોશુ સમગ્ર વિશ્વના અન્ય દેશોમાં છે તેની ન્યાયીક તપાસ કરાવે તોજ સાચી હકીકત થી સરકાર માહીત ગાર થઈ શંક શે.

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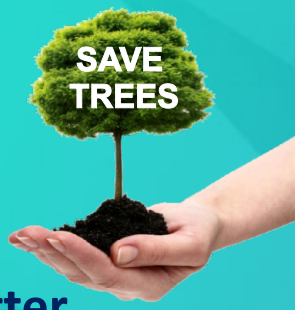

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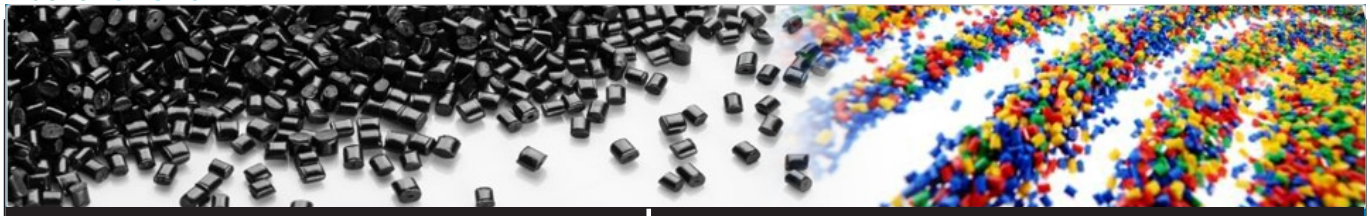

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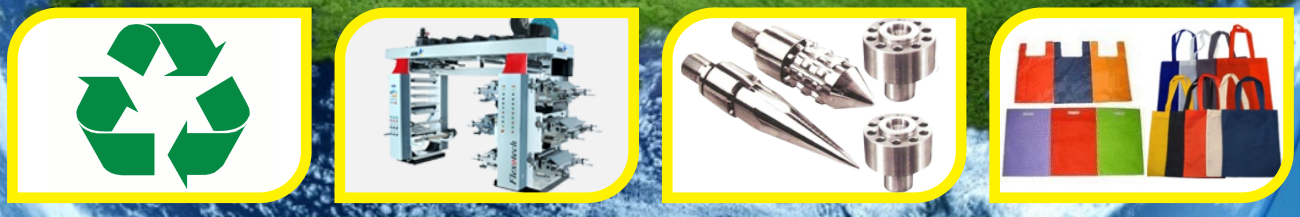

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