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Plastic Tomorrow

BI- MONTHLY MAGAZINE, BI - LANGUAGE ENGLISH & GUJARATI PLASTIC INDUSTRY PERIODICAL.

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Success Story

INDRAJIT GHOSH

GLOBAL AMBASSADOR Of
AHRI FOR SAARC COUNTRIES

Chairman
MSME Chamber of
Commerce
And Industry of India,

Sahkar Industries

Manufacturer & Exporter of : Plastic Processing Machines

MAKE IN INDIA

EXPORTED TO AFRICA & USA

15 T to 600 Tonnes Horizontal Injection Moulding Machine

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

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

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

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

Online Rotogravure Printing Machine

MSC
ROTO I FLEXO I LAMINATION I SLIT

Application:

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

Features:

Oscillating Doctor Blade Movement Facility

Drying Blower Facility

360° Universal Movement Oscillating Doctor Blade

Main Shaft Power Transmission Facility

Air Pneumatic Pressure Rubber Roller

Frequency Drive And Control Panel With CE Std Components Fitted

Technical Specificaton:

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

Online Mini Rotogravure Printing Unit

Application:

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

Features:

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

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Archroma starts production of hand sanitizers to help fight COVID-19

As part of its active engagement in the fight against COVID-19, Archroma, a global leader in color and specialty chemicals towards sustainable solutions, started bulk production of a new range of hand sanitizers at its Landhi site in Pakistan in May 2020. The new Kieralon® HS range was developed by the R&D team at the Archroma Center of Excellence in Karachi, in line with the World Health Organization (WHO) recommendations.

ARCHROMA
LIFE ENHANCED

Sanitizers are currently in high demand in Pakistan in hospitals, isolation centers, medical institutes and other health care environments, due to the COVID-19 outbreak. The use of sanitizers has also been made mandatory in all factories, offices and public places, driving the demand even higher.

The Kieralon® HS range is being produced in different grades and concentrations to eliminate a broad range of germs, bacteria and viruses, to cater for various healthcare and hygiene requirements. They also include emollients and display non-stick and quick drying effect, for skin comfort.

In April 2020, Archroma announced the introduction in Brazil of Mowiplus® HPC 9600, a new thickener for sanitizing gels, developed to address the global shortage in the thickener traditionally used for sanitizing gels.

Archroma is also actively supporting manufacturers in the production of face masks and medical protective equipment. Its antimicrobial and barrier products in particular are in high demand, and Archroma is making every effort to assist existing and new customers entering this sector by providing technical know-how and support.

The company is supporting producers of packaging & paper who are facing high demand for food packaging as many restaurants have switched to delivery or take-away, as well as for parcels and boxes supporting online shopping.

Mujtaba Rahim, CEO of Archroma Pakistan comments, “Within Archroma we are cognizant of the acute community need for high quality hygiene products that are also comfortable for users, as hand sanitizers tend to be harsh on the skin, so we took on the challenge to develop and start production in record time. The Archroma team in Pakistan won’t rest in fighting the COVID-19 pandemic, and hopes this new product will help to stop the spread of the virus and the suffering that it causes.”

Courtesy

SABIC fast tracks thermoplastics orders for Mindray and DIRUI to expedite rapid production of critical COVID-19 equipment

Lifesaving medical equipment, from ventilators and defibrillators to auto-chemistry analyzers, is essential in overcoming COVID-19. To meet urgent requests from global customers that manufacture these products, SABIC has taken extraordinary steps to expedite order fulfillment for its specialty thermoplastic resins. As an example, the company rapidly supplied significant quantities of thermoplastics to two Chinese medical device manufacturers, Mindray and DIRUI. Despite shutdowns and exponential increase in demand, SABIC has worked to ensure fast and steady supply of desperately needed medical equipment to hospitals on the front lines.

"The coronavirus pandemic has spotlighted the critical role of material suppliers in the face of urgent demand for high volumes of medical devices, supplies and personal protective equipment," said Martin Tam, SABIC director, Customer Fulfillment APAC, Specialties. "As a leading plastics manufacturer in the medical products supply chain, SABIC has risen to the challenge of supporting the healthcare industry during this difficult time. Our agility, seamless scalability and broad global resources are allowing us to do our part to reliably deliver the specialized materials needed for healthcare applications used to diagnose, monitor and treat patients."

10,000 Medical Devices for Italy Mindray Medical International Limited is a global medical instrumentation developer and manufacturer based in Shenzhen. When Mindray received an urgent order from Italy for 10,000 units of its ventilators, defibrillators, monitors and in vitro diagnostic (IVD) machines, the manufacturer contacted SABIC for a range of its high-performance specialty materials. Mindray's order included LNP™ EXL copolymer, internally lubricated LNP™ LUBRICOMP™ and anti-static LNP™ FARADEX™ compounds, and ULTEM™ resin. SABIC delivered these materials to Mindray's contract molder within weeks.

Further, Mindray urgently needed high performance SABIC materials to produce 3,000 pieces of medical equipment for two new hospitals being constructed in China. The SABIC team worked around the clock for two days to produce much-needed thermoplastics for Mindray, primarily for device housings.

"As COVID-19 cases spiked in China and Italy, we faced intense pressure to produce and ship essential medical equipment as fast as possible," said Timmy Tong, procurement business director for Mindray. "SABIC went above and beyond to deliver the materials we required, in a very short timeframe, with the high quality and consistency we expected. Particularly in this crisis situation, our strong, longstanding relationship with SABIC is demonstrating its priceless value." 1,000 Auto-chemistry Analyzers for China

DIRUI Industrial Co., Ltd., a leading provider of high-quality diagnostic equipment and reagents in China, also faced urgent customer requests for equipment to support COVID-19 care. In March 2020, the company requested expedited delivery of two grades of SABIC's NORYL™ polyphenylene ether (PPE) resin. These advanced thermoplastic materials were needed to produce 1,000 auto-chemistry analyzers for Chinese hospitals. The analyzers are used to measure patients' kidney and bladder function, among other tests. Although SABIC's Shanghai facility was shut down to contain COVID 19, SABIC quickly mobilized to manufacture, fulfill and supply DIRUI's order.

Of the two grades of NORYL™ PPE resin, one provides dimensional stability and chemical resistance for the analyzer housings, while the other delivers the hydrolytic stability needed for the water channel.

"We are thankful to SABIC for the tremendous job they did in fulfilling our critical order so that we could rapidly produce the auto-chemistry analyzers needed to help control the pandemic," commented Henry Chen, supply chain development manager of DIRUI. "We look forward to continuing our seamless and efficient collaboration with SABIC in the future."

For more information
yvonne.yan@sabic.com
www.sabic.com

Courtesy

Mondi Partners With Meat Producer Hütthaler To Create New Fully Recyclable Plastic Packaging

- Mondi developed new recyclable mono-material film for thermoforming applications with Hütthaler.

- Hütthaler has launched the packaging for meat and sausage products in Austria, where the new thermoforming film is fully recyclable in existing plastic recycling streams.

Leading global packaging and paper group Mondi, has partnered with Austrian meat producer Hütthaler to produce a fully recyclable thermoforming film made from a mono-material for

their meat and sausage products.

The film is made of a mono-material solution that can be fully recycled and provides a barrier to protect the food and extend its shelf life. The independent cyclos-HTP Institute for Recyclability and Product Responsibility has awarded this film the highest classification "AAA" for recyclability.

Hütthaler's requirement was to replace the previously used film with a recyclable solution. The

company was looking for a more sustainable approach that would not compromise on quality or the attractive presentation of the food.

Hütthaler approached Mondi to provide an alternative. Using its customer-centric EcoSolutions approach, Mondi was able to re-invent the packaging for Hütthaler by maintaining optimum functionality while replacing less sustainable packaging, reducing raw material usage, and designing packaging that was ready for recycling. Mondi completely manufactured the new packaging. In particular, the bottom film is supplied by Mondi's Styria plant in Austria, which has also been awarded AA+ for food safety by the British Retail Consortium (BRCGS).

"We worked with Hütthaler to find a more sustainable approach that still meets the high food standards, preserves shelf life and guarantees runnability on the machines. The new film meets all these requirements and also helps to save disposal fees due to its recyclability. At Mondi we have an amibition to be sustainable by design and meet our customers sustainability requirements by providing innovative solutions," says Thomas Kahl, project manager for EcoSolutions at Mondi Consumer Flexibles.

"For more than 120 years it has been our passion to offer our customers the highest quality. That's why it was particularly important in our animal welfare project to act as sustainably as possible not only along the entire value chain, from agriculture to the consumer, but also in terms of packaging solutions. We were able to implement this in cooperation with our long-standing partner Mondi due to their expertise and experience in sustainable food packaging", said Dr. Florian Hütthaler, owner of Hütthaler KG.

For more information
www.mondigroup.com
mondi-group

Courtesy

Ascend completes purchase of Poliblend and Esseti Plast

Acquisition expands Ascend's portfolio and production footprint

As part of its global growth strategy, Ascend Performance Materials® has completed its acquisition of Italian firms Poliblend and Esseti Plast. With this purchase, Ascend expands its portfolio into other engineered plastics, recycled resins and masterbatches.

"Poliblend and Esseti Plast complement our current business exceptionally well," said John Saunders, Ascend's vice president of Europe. "Our experience as a large-scale, fully integrated polyamide 66 manufacturer coupled with Poliblend's portfolio of recycled and virgin PA66, PA6 and POM, and Esseti Plast's extensive masterbatch operations will offer our customers more choices for quality, high performance materials on a global scale."

As part of the purchase, Ascend establishes its second production facility in Europe. The acquisition also includes Poliblend Deutschland, a distribution facility located in Germany.

"This acquisition, coupled with our new compounding facility in China, will allow us to serve our customers locally around the globe," Phil McDivitt, Ascend's president and CEO. "We now have production, product development and testing capabilities in North America, Asia and Europe, giving us additional scale to respond to our customers. Furthermore, a product developed for a customer in Europe can be quickly replicated and produced across the globe to meet shifting supply chain needs."

Announced in February 2020, the acquisition was put on hold as COVID-19 cases spiked in Italy and then in the United States. "I am extremely grateful to Poliblend's leadership and our team in Europe for navigating unprecedented circumstances to ensure this deal closed," said McDivitt. "The safety and health of our people is our highest priority."

www.ascendmaterials.com

Courtesy

TE Connectivity's UV-SCE Printable Heat Shrink Sleeves are Ideal for Outdoor Applications

TE Connectivity (TE), a world leader in connectivity and sensors, announced today an offering of UV-SCE printable heat shrink sleeves suitable for identification of wires and cables where some exposure to UV light is possible. Industrial applications include rail, mass transit, lighting, solar and HVAC.

"Our printable heat shrink tubing capabilities are not only for indoor applications. For those outdoor applications where UV light is of concern, TE offers a solution for this type of harsh environment. UV-SCE couples the ease of use on our thermal transfer marking systems, yet it addresses needs for substrates that maybe exposed to some exposure to UV light, in addition to being rated at -55C to 200C." said Tom Perea, industry sales manager, Americas.

In addition to its resistance of Ultra Violet Light, UV-SCE is non-flame propagating and is resistant to key rail and industrial fluids including diesel. Product performance and testing details can be found in RW 2534 and Technical datasheet: TTDS-255 on te.com. UV-SCE does not contain any declarable or prohibited substances from the UNIFE Railway Industry Substances List. Additionally, UV-SCE is REACH and RoHS compliant.

TE's Identification Solutions portfolio offers a complete solution for harsh environments. By, using preloaded templates in TE's WINTOTAL software users can 'see' the sleeve and inputted data on the user's computer screen. Seeing it before you print it, saves valuable time and money. Our range of thermal transfer printers along with coordinating UV resistant ribbon ensures print permanency for years to come. Reach out to your distribution partner or TE to learn more about Identification Solutions for your business.

For more information
www.te.com

Courtesy

EXHIBITION DETAIL

EXHIBITION	COUNTRY	DATE
COMPLAST	LAGOS - NIGERIA	1-3 DEC 2020
PLAST ASIA 2020	BIEC - BANGALORE	29 JAN to 1 st FEB 2021
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

INDRAJIT GHOSH

Global Chairman of MSME Chamber of Commerce And Industry of India/ Chairman Development and Project Lions Club Delhi-NCR.

Helping 70% for MSME Industries and 30% for Larger Industries (with 47 verticles)and Make in India Initiative.

Plastics, Packaging, Recycling & Waste Management in various national & International Magazines. Recently Awarded Honorary Doctorate for Social work by UNRSI, Sweden.

Chairman MSME Chamber of Commerce And Industry Of India, Chairman Lions Club, Delhi-NCR, SAARC Global Ambassador for AHRI, Global Ambassador of World Peace, Vivekananda World peace Foundatation

Mr. Indrajit Ghosh is currently the Chairman MSME Chamber of Commerce And Industry Of India, Chairman Lions Club, Delhi-NCR,SAARC Global Ambassador for AHRI ,Global Ambassador of World Peace, Vivekananda World peace Foundation

He speaks volumes of his experience in the corporate field, and having completed 34 years in a cut-throat corporate world is no mean feat either. You could write a book on his academic and professional achievements because that is how rich his life both academically and professionally has been. Moreover his achievements just go on to show his perpetual hunger for learning and how clear he was regarding achieving his goals. And that hunger is still burning within him even 34 years later.

Early Life and Academics:
Mr. Indrajit Ghosh is a Mechanical Engineer hailing from Howrah, West Bengal. He began his schooling from Bengal Engineering College ModelSchool. He then went on to do double MBA from the Institute of Management (IMT) Ghaziabad and MBA from International business management institute(ibmi) from Berlin, Germany. Mr. Ghosh has completed a host of diplomas in different fields like Diplomas in Circular

Economy from Malaysia, and several diplomas from IBMI, Germany like Business Management, Sustainable Management, Global Governance and Digital Marketing. Diploma in Corporate Social Responsibility (CSR) from Metropolitan School of Business Management, London.Diploma in Leadership Principles from Harvard Business School, Boston, Massachusetts USA

Career Highlights:
Mr. Ghosh has successfully completed 34 years in the corporate world, particularly in the Plastics and Packaging industry, with incredible work in different fields that would benefit the environment and mankind in the future acting as his testimonies. Out of the 34 years of his global experience, 10 years were dedicated to experience in Plastic Recycling, Waste Management, Environment, Climate Change, Air Pollution, Renewable energy, Bigas, Start-ups, and the list goes on and on.

He also writes articles on Plastics, Packaging &
Recycling at Oriented UK, IPI, All India Flexible Packaging Association and soon.
He left Uflex in December 2011 and started his own business. He is also the Lifetime Member of ICEMI, which is one of his closest friends Mr. Sandeep Marwah's organizations.

Mr. Ghosh has vigorously travelled to different

parts of the world; he has travelled to more than 40 countries to be precise ,Gulf Countries including Dubai 35 times and has successfully networked and connected with industry stalwarts acrossthe globe. He has also closely worked with the Prime Minister's Office (PMO) and the central ministry for various initiatives by the Centre like the Clean India, Make in India initiative and Green India initiatives. He has also actively participated in helping MSME organisations to grow as this would help the Indian economy in its growth in the future and hence MSMEs form an integral part of the economy.

He is also the member of the National Team of Shisht Bharat, which advocates World Peace and Cooperation among people living in the same society. He is also the MD of Dynamic Outreach PrivateLimited & MGNG Global Events LLP, Advisor for Global India Business Forum, Global Advisory Board ,member of Recyclers Foundation, Industry
Advisory Board Member - Amity University, Plastic Committee members of MRAI, Director Sales & Marke in Resource E-waste Solutions PVT Limited. He is also an active member of IPI AIPMA, FIEO, ASSOCHAM, PHD CHAMBER, CII & FICCI. He is also Ambassador for SAARC COUNTRIES - Access Human Rights International (AHRI) Bangladesh, Global Peace Ambassador of Vivekananda World Peace Foundation (Approved by Ministry of Commerce, Givt of India & UN) and the list of the many hats he wore during his career is endless. 179 Awards, Recognition and Honours till now.

While working for Sintex Industries Limited, Mr. Ghosh received the Best Performer of the Country continuously from 1988 to 1993. And during his career at Uflex Limited the largest Indian Multinational in Packing also he received several awards along with 5 promoons.

He was also facilitated with the highly prestigious Kotler award (named after the Guru of Management Dr. Philip Kotler) of Global Leader in Plastics, Packaging. 2019. Leadership Summit organised by the Global Triumph Foundation in New Delhi, where he was invited as the Guest of Honorand got the Award of Global Leader in Plastics, Packaging & Recycling.Best Leadership awardfrom WAC Council,August 2020,Dr Sarvpalli Radha Krishnan award bon Teachers day 5 th Sept 2020,Indian Achievers Award for promoting MSMECCII in the recognition of Apart from these highly prestigious awards and accolades there are more than 197 awards and certificates to his name, taking a place of pride in his awards shelf!

He has also been honoured with his immense contributions towards breaking the Covid
stigma around the pandemic and its patients and he has received nearly 65 appreciation certificates as of now.

Among many honours he has received till date, the ultimate honour for Mr. Ghosh had to be when he was awarded the prestigious award INTERNATIONAL ICON in Global Plastic & Packing at Bangkok 2019.

Countries:
He will play a vital role on Human Rights, Youth Rights, Environmental protection, Trafficking, Child welfare and many social issues.

Personal Life:
He has a small family consisting of one daughter, who is presently working for the last 4 years in
NewYork and is staying in Times Square. His son has completed his masters in International Business from Monash University, Melbourne and is working for the last 3 years in Melbourne.
On the other hand, his wife is working in a top Management post in Springer India, the largest Book & Journal publishers in the world, having their head office at Heidelberg, Germany.

Charity Work:
Mr. Ghosh is also involved in a lot of charity work as he always tries to find ways to give back to the society in whatever way he can. Hence, he is now working to start a big project of Waste Management in a North Indian State with 1000 Tons waste being generated every day to make Biogas/ Bio CNG to the state citizens.

He is also associated with a Cancer Society and with Anti-1corruption Foundation of India. His immense contributions towards breaking the COVID stigma around the pandemic and its patients has resulted in him being awarded with the Certificate of Kindness by World Records Biennale for “spreading kindness digitally”


GOLDEN BOOK OF THE EARTH
THE MOST INSPIRING PEOPLE ON EARTH
Awards & Summit 2020
In the Golden Book of the Earth tilted "101 Great Personalities Who Have Inspired The World
You are rich in versatility, and known as an ideal example for the youth! Its an immense pleasure to inform you that you have succeeded in making your place in the list of 101 important persons of the world. Our forthcoming global book, "The Golden Book on Earth" is a bold step in showing your amazing power to the world even in the times of economic crisis this world is facing right now. Wishing you a bright future ahead..
Congratulations
INDRAJIT GHOSH
Chairman MSME Chamber of Commerce and Industry of India
Virtual Award & Summit
18th Oct. 2020
I am Prudence Onaah, CEO of Prudent Pens, a Writing and Publishing Company.
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psgchead@gmail.com | www.swarnabharatparivaar.org

ગામદોડે, ત્યાંનાદોડો. જુદીદિશાપકડો.

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

નોન-વોવનબનાવવા માટે મશીનલઇઆવનારાનીશીદશા થઇ એ ગામ આખુંભૂલીગયું છે.

મોટાંકીભાંડો લોકોભૂલી જાય છે,એટલે આ વાત બહુસામાન્ય છે.

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

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

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

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

જયહિંદ.

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

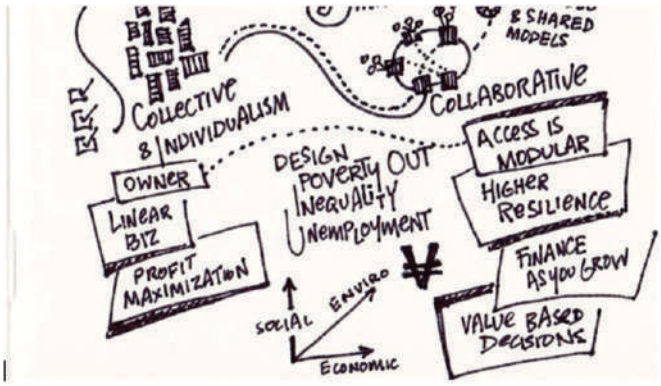
mail@positiveaggression.in9624112091 / 9879552875

CIRCULAR ECONOMY 2.0 IN THE NEW OLD NORMAL

SAMEERJOSHI, PHD
joshisameera@gmail.com

Nothing is Wasted!

EARTH 2020



The concept of the Circular Economy in itself is mind-blowing as it imitates natural cycles through feedback loops at several levels of our current extraction, production, and consumption chains. Mind-blowing in the multidimensional benefits that could be hidden, where abundance could take the lead over the scarcity of resources such as water, food, fossil fuels, and other precious metals that one needs in our societies today. The main objective of such a framework being the decoupling of our resource intakes versus our thirst for constant economic growth — as returns always need to be higher than the original investment -. Through carefully designing our products and services, through focusing on nurturing and caring for all the elements that we have invented for the right functioning of our economy, and with the understanding that all these elements and sub-parts thereof have a specific role to play within it, this set of principles and concepts intend to regenerate our economy by a sound comprehension and alignment with environmental patterns — and not to limit ourselves to them, i.e. if we align ourselves well with these configurations, there is barely any limit to endless innovation! -.

According to Accenture — under an advanced scenario — we can close the expected resource gap of 40 billion tons (optimist forecast), which are needed by our economies to keep flourishing, by 2050. What does it tell us? Well, it means that we have the opportunity to cautiously design the upcoming decade in such a way that, instead of diminishing the value of the assets which we depend on — with short-term decisions — we could increase it by setting us up for an abundance of food, non-food nutrients, and technical goods, to fulfill all our needs. This also means that, in the current economic framework, growing economies will not have enough resource access — or at a cheap enough cost — to expand as stagnating economies previously did. And we are talking here about the biggest part of the world population…

The spherical economyconcept

The spherical economy as the next-generation circular economy; maybe “circular economy 2.0.” Because it’s not just a simple loop. For instance, it’s not just a matter of taking old PET bottles and turning them into new PET bottles. Rather, when we collect PET bottles, that material should be available to make whatever new product is the best use of the material. This is what happens in nature. So we need to recognize that if we want to have an optimized system for technical nutrients (things like plastics), we have to be willing to think about all of the interconnected loops. That gives a much better opportunity to create a resilient system that provides better sustainability benefits to the planet. One needs to think bigger picture.

Role of the waste and recycling industry would be in the spherical economy

These companies are critical because we have to get the materials back and put them back in the system. For some materials, that's relatively easy to do, and for others, it requires specific legislation to drive the collection. Car batteries, for instance, are recycled at a very high rate because states have fees on old batteries, which helps pay for the collection and shipment of those materials to be recycled. That's an example of how we've created a system to get the recyclable materials back—and also keep the hazardous materials inside the battery from escaping into the environment.

For everyday packaging—chip bags, candy wrappers, cheese pouches—these are not as easy to collect via a reverse-logistics system like with the batteries. There are a lot of them, and they're very lightweight—so to effectively collect these types of items, one needs to aggregate.

This is the concept put forthBy Jeff Wooster, global sustainability director at Dow. Dow is a materials science leader, committed to delivering innovative and sustainable solutions for customers in packaging, infrastructure, and consumer care.

Dow has a whole range of projects designed to make the system that we operate more efficiently. It's relatively straightforward for an individual company to work on a small sustainability project that only impacts their organization. It's more challenging to work on a project that affects several organizations. And it's even more complex to work on a project that affects the whole system. But one is seeing companies and NGOs and governments starting to think more holistically. They are trying to determine what the system requires to be more successful and then put in place programs that help drive in that direction.

Dow, have several commitments on sustainability that they announced—one of which is to reduce the amount of plastic packaging that ends up in the environment, which is outside of our immediate control but within our influence. The y are also working to make all packaging recyclable, after doing the job of collecting and reusing them.

Aligning our economic world with natural cycles seems to be the right (and wise) thing to do, But are we ready to implement such a new framework? Are we aiming in the same direction, i.e. a better life for all, or do we transpose our current model into a more circular one without genuine systemic changes? And, do we want it, this better life for all?

If so, to achieve this vision, we might have to think beyond just a circular economy as it is designed today: with the same corporate powerful actors, in the same financial paradigm, replicating current human interactions and power relations. In a sea of challenges, building a circular economy can be achieved as we learn the lessons of the NOW OLD NEW NORMAL to hit the intended gigantesque intentions for a better life on our planet and its inhabitants.

Dr. Sameer Joshi, Ph.D.

Energy Conservation Opportunities in Plastics Processing Industries

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Energy management is potentially one of the most cost-effective actions that a company can take to reduce both carbon emissions and costs. Energy costs are rising and there is no reason to believe that they will decrease in the future. The returns from energy management are much better than the returns from increasing sales. Energy management requires both measurements and an understanding of the process.

This section presents the most common recommendations of electrical energy conservations that can be applied in a typical plastic facility.

Improvement of the Electrical Power Factor of the Facility:

The average power factor in this sector has been estimated as 0.89 – 0.95, which is considered low in terms of industry standards. Power factor can be an important aspect to consider in an AC circuit; because any power factor less than unity means that the circuit's wiring has to carry more current than what would be necessary with zero reactance in the circuit to deliver the same amount of (true) power to the resistive load. Hence, the power factor of the generator can be improved by addition of capacitors parallel to the line. The penalty due to power factor has been estimated as 8-12% of total billing. By adding the appropriate capacitor, the charged amount will be reduced to zero. The payback period will be approximately 5-7 months.

Replacement of Energy-Inefficient Motors:

It has been found that the average current operating efficiency of a typical motor is 78%. This low efficiency is due to the common practice by many facilities to simply rewind an existing motor when it burns out rather than purchasing a high efficiency replacement motor. However, a rewound motor is typically less efficient than a new one. The loss of efficiency is due to the age of the failed motor and degradation of its stator core during failure, or as a result of the rewind process. The typical efficiency loss ranges from 1% to 5% for each rewinding process.

Installation of Variable Frequency Drives (VFD):

In many industrial environments, the application of variable speed control is cost effective. Energy savings result from reduced power consumption by the motors. As the system power requirements are reduced, the power consumed by the equipment can be reduced by an amount significantly greater than can be achieved with the existing controls. For example, in the case of pumps, flow is often controlled (throttled) by valves, which increase the pump head and reduce the flow rate. In the Plastic industry, VFDs can be applied to injection and blow moulding motors, pumps, and compressors. It is estimated that a saving of 15-20% of the motor electrical energy can be achieved if such controllers are adopted. Assuming an average saving of 17.5%. In average, the payback period will be approximately 9 -12 months.

Repair of Compressed Air Leaks

The cost of compressed air leaks is the energy cost to compress the volume of lost air from atmospheric pressure to the compressor operating pressure. The amount of lost air depends on the line pressure, the compressed air temperature at the point of the leak, the air temperature at the compressor inlet, and the estimated area of the leak. The leak area is usually detected depending on the sound and feeling of air flow from the leak. An alternative method to determine total losses due to air leaks is to measure the time between compressor cycles when all air operated equipments are shut off. It is estimated that a saving of 15-20% of the compressor electrical energy can be achieved if air leaks are eliminated. Assuming an average saving of 17.5%. In general, implementation involves one or two of the following: replacement of couplings and/or hoses, replacement of seals around filters, shutting off air flow during lunch or break periods, and repairing breaks in lines, etc. The payback period will be approximately 10-20 days.

Avoiding Poor Practices of Compressed Air Usages:

On site, several poor practices of compressed air usage have been noticed. For examples: Several companies use the compressed air to cool the extruded pipes or some devices such as motors, while others use it for cleaning purposes. Since the use of compressed air is either for cooling or cleaning purposes, air at sufficient flow rates can be adequate for these purposes. This can be done by blowers which use much less energy. It was estimated that a saving of 10-20% of the compressor electrical energy can be achieved by avoiding such poor practices. Implementation costs include purchasing blowers to replace the compressed air. The payback period will be approximately 1- 2 month.

Insulation of the Extrusion, Injection, and Blow Moulding Machine Heaters :

On site, it was found that some areas of the extrusion, injection, and blow moulding machines are not well insulated. This results in heat losses and associated energy costs. These areas of heat losses have to be studied. The energy savings were estimated to be 10-14% of the total input electricity to heaters. Implementation costs include purchasing of insulation material in addition to labour costs with a payback period of approximately 1-2 months.

Building

Building energy costs are not always a significant percentage of the total energy costs in plastics processing and at the typical site they are 7– 8% of the total energy costs. Despite this, they are almost always the first area to be considered and improving building energy efficiency can reduce costs, improve staff comfort and improve work output.

Lighting

Lighting only represents around 5% of the energy use at a typical plastics processing. Lighting can be divided into 'ambient' and 'task' lighting - they are very different. Ambient lighting is to allow safe movement; task lighting is to allow completion of a specific task. The lighting levels are very different, recognizing this and taking action to separate them can reduce costs.

A 'lighting map' is vital in reducing lighting energy use. Map the lights, switches and controls on the site to identify areas for improvements.

Investments in replacing the LED lights & in controls such as sensors, timers and push switches can automatically reduce lighting costs without affecting product or lighting quality.

Overall Energy and Cost Savings:

After implementing the recommendations for all plastic processing facilities, the total annual electrical energy savings, the electrical demand savings, and the total annual cost savings are Hugh. The average payback period will not exceed 7-8 months.

Conclusions

An analysis and estimation of the potential electrical energy saving opportunities in the plastic industry has to be carried out. The results will be - there is a large room of improving the efficiency of plastics processing unit electricity consumption in this industry with remarkable energy cost savings. The total electricity cost savings represent nearly 23% of the industry's total annual electricity bill. This can be considered as an effective option for increasing profit and competition within this sector. Having listed all the different remedies that can lead to electrical energy conservation, the implementation of these recommendations is very crucial for the plastic industry to reach the desired cost savings. Such study can be considered as the corner stone in achieving national energy savings among all plastics processing industries. Therefore, it is highly recommended to carry out such studies and analyses in industries.

Sanat N. Shah

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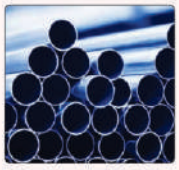
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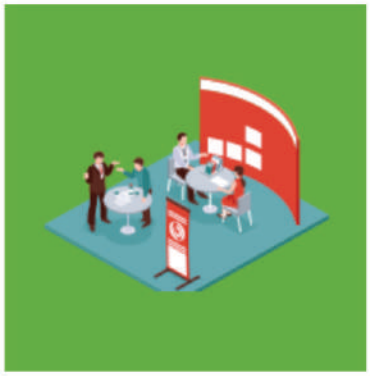

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