VOLUME - 7 ISSUE - 2

MAY 2010

iPf PLASTICS INDIA

AN OFFICIAL ORGAN OF INDIAN PLASTICS FEDERATION

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PLASTICS INDIA

A journal for the growth and development of plastics trade & industry

Published by :
INDIAN PLASTICS FEDERATION
8B, Royd Street, 1st Floor
Kolkata - 700 016 (INDIA)
Phone: 2217 5699 / 5700 / 6004
Telefax : 91-33-2217 6005
Email : ipf@cal2.vsnl.net.in
Web : www.plasticfederation.org

Printed by :
CDC Printers (P) Ltd.
Tangra Industrial Estate - II
45, Radha Nath Chowdhury Rd., Kol-45
Phone : 2329 8856-57, Fax : 2329 8858
E-mail : cdc@cdcprinters.com

Editorial

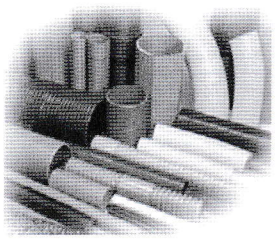
Dear Members,

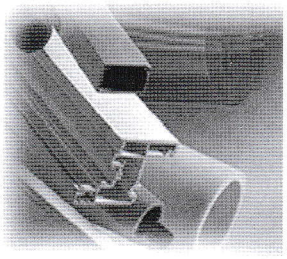
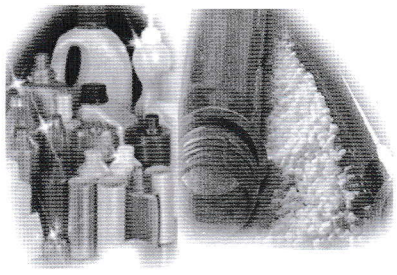
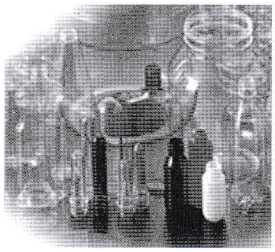
With the wave of a flag, Mr. B.M.Bansal, Chairman, Indian Oil, signalled what could well emerge as a major game changer in the Indian domestic petrochemical business. The despatch of the first truck carrying a consignment of a Poly Propylene grade from the gates of Indian Oil's state-of-the-art Petrochemicals Complex at Panipat, will be followed by the roll out of a countrywide marketing blitz that is expected to ride on the company's formidable distribution channels spread across India. Speaking on the occasion Mr. Bansal said, "With the completion of our Petrochemical Complex in Panipat, we have crossed a major milestone in our aspiration to emerge as an integrated and diversified company. It is perhaps our biggest investment at one location. With this, Panipat will emerge as a major hub and be the primary driver behind an unprecedented industrialisation spree in Northern India, triggering off massive investments in a range of downstream plastic processing and allied industries in the region", he added. Indian Oil has showcased its capability to offer a full product slate to customers covering all segments of petrochemicals viz. LAB, PX-PTA and Polymers. With the domestic polymer market growing at a sustained pace, the company has laid out a web portal based marketing strategy that will help it garner a significant share of the petrochemicals market in the future.

The world-class Naphtha Cracker at Panipat, built at a cost of Rs 14,400 crore, is the largest operating cracker capacity in India today and the naphtha feed for the unit is being sourced internally from Indian Oil's Koyali, Panipat and Mathura refineries. The Naphtha Cracker comprises of the following downstream units - Polypropylene (capacity: 600 KT), High Density Polyethylene (HDPE) (dedicated capacity: 300 KT) and Linear Low Density Poly Ethylene (LLDPE) (350 KT Swing unit with HDPE), Mono Ethylene Glycol (MEG) plant (325 KT). The cracker will produce over 800 KTA of ethylene, 600 KTA of Propylene, 125 KTA of Benzene, and other products viz., LPG, Pyrolysis Fuel Oil, components of Gasoline and Diesel. The Polypropylene (PP) unit is designed to produce high quality and high value niche grades including high speed Bi-axially Oriented Polypropylene (BOPP) (used for food packaging and laminations), high clarity random co-polymers (used for food containers and thin walled products) and super impact co-polymer grades (used for batteries, automobile parts, luggage and heavy duty transport containers). Polyethylene is used for making injection moulded caps, heavy duty crates, containers, bins, textile bobbins, luggage ware, thermoware, storage bins, pressure pipes (for gas and water), small blow-moulded bottles, jerry cans, etc.

With the addition of capacity building in India supply of materials should not be any constraints for processors to seek materials from within India.

Pradip Nayyar
Editor



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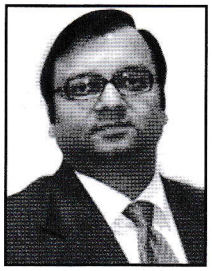
PRESIDENTIAL ADDRESS



Dear Members,

This is my fifth message to you after taking over as President. Over the past 3 days, crude oil futures on the Nymex has lost more than six dollars a barrel, dropping below US$80/barrel for the first time since mid-March. Crude oil prices has been pushed lower as confidence in the global market has been shaken by debt troubles in Europe and renewed efforts to tighten monetary policy on the part of China's Central Bank. After opening the week at US$86.19/barrel, crude oil prices lost over nine dollars in the next three trading days to settle at US$77.11/barrel on Thursday as investor confidence in the global markets was rocked by ongoing protests in Greece, concerns over possibly debt problems in Spain and Portugal as well as news that the Chinese Central Bank has announced its third reserve rate increase of the year in order to counteract what the Bank considers to be excess speculation in the Chinese property market.

Greece's debt problems have continued unabated this week despite the recently approved •110 billion EU/IMF rescue package. Investors have expressed concerns that this current package, while easing Greece's short-term funding issues, will not be enough to put the government's finances back onto a sure footing, especially as the government has not yet specified what items it intends to cut from its budget and is facing mounting popular resistance to its planned austerity measures, leading some investors to speculate that the government may have lost control of the situation. Investor confidence in the euro has been further shaken by concerns that fellow eurozone countries Spain and Portugal might soon find themselves in a public debt crisis closely resembling the one that has recently enveloped Greece. These difficulties in the eurozone pushed the euro to below US$1.28 vs the dollar, the furthest the common currency has fallen since March of 2009. As crude oil is often held as hedge against the US dollar, the inverse relationship between the strength of the dollar and crude oil prices also contributed to crude's recent slide on the market. Recent interest rate increases in Australia and Norway have also contributed to the dollar's upward momentum on global markets.

Another factor contributing to skepticism about the health of the global economy is the fact that China's Central Bank has recently raised its reserve requirements from member banks for the third time this year, with sources attributing the Bank's actions to its desire to keep speculation on the country's property market in check. The Chinese government is also said to be considering further measures to dampen property speculation over the short term, including proposals to implement a general property tax. Taking their cue from the government's desire to cool down the market, equities traded on the Shanghai Composite Index tumbled 4.1% on Wednesday.

As per current status, Asia is expected to receive 200,000 tons of Western naphtha. This is less by 100,000 tons from May levels, and seems insufficient to meet healthy demand at a time when India is expected to lower its June exports.

Propped by robust demand from China, demand in Asia has been strong, as crackers are operating at high rates since 2009. Additional crackers that have recently gone on-stream in South Korea, Singapore and Thailand have also added to the supply shortfall. Demand for June is reported to be firm amid high operating rates at crackers. Despite concerns of an ethylene glut after Thailand and Singapore added a nameplate capacity totaling 1.7 mln tpa in March, there are no signs of petrochemical margins falling into the red so far.

But traders remain wary over the sustained strength of the naphtha market.

ADNOC and Tasweeq will raise supplies due to additional gas output, and crackers may replace more of their naphtha feedstock with liquefied petroleum gas (LPG) from July.

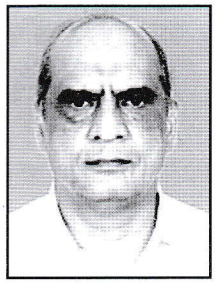
Europe may also push out more naphtha to Asia after July as gasoline demand is not expected to hold up.

With Warm Regards,

Sourabh Khemani
President

From the Desk of

The Hony. Secretary



Dear Members,

You will be glad to know that an IPF delegation consisting of **28 delegates** visited **Chinaplas 2010** held at **Shanghai, PR China** from **April 19 – 22, 2010**. M/s Orbitz Corporate & Leisure Travels (I) Ltd. was authorized as the tour facilitator for this travel that including sight seeing apart from visiting the exhibition show. **Delegates** of **Chinaplas 2010** have **expressed their appreciation for the good arrangements organised by IPF**.

Your **Federation** has requested the **Addl. Secretary, W. B. S. R. D. A.** to direct **all rural authorities** to **construct their roads** using **plastic waste mixed with bitumen**.

A report has been received from the **Chairman, Kalyani Municipality certifying that the road constructed at Kalyani using plastic waste mixed with bitumen has a better performance than the adjoining roads using the conventional road construction methods**. **The Mayor, Chandernagore Municipal Corporation**, has also informed the Federation that the **road constructed in March 2010 using plastic waste mixed with bitumen is much smoother than the other roads** constructed or maintained compared with other roads where plastic waste has not been used.

The Chief Law Officer – West Bengal Pollution Control Board (WBPCB), has **appreciated IPF's effort in the use of plastic waste in road construction**. He has requested IPF to prepare a short video film on the Use of Waste Plastics in Road Construction that may be sent to all municipalities. The Member Secretary has assured full cooperation and support in our effort from their side. Shri R. A. Lohia – Chairman of the 'Plastics in Environment' Sub-Committee of IPF has started working on the video film as per his request.

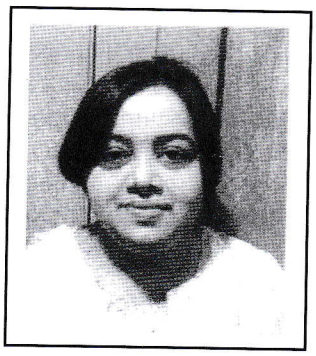
On the request of PET Preform and Plastic Profile manufacturers for reduction of VAT **a memorandum has been sent to The Commissioner of Commercial Taxes**, Government of West Bengal for inclusion of "PET preform" in Schedule III list Serial No.155 and "PVC/Plastic profiles and sections" under Schedule C of the West Bengal VAT Act.

With best wishes,

Poddar

Ramawatar Poddar
Hony. Secretary

High Density Polyethylene Tarpaulins for Entrepreneurs - Multiple End use sectors



Ms Poorvi C. Desai,
Sr. Manager, Business Development – Polymers,
Reliance Industries Limited

Plastics play a major role in the modern world. They occur in various forms, shapes and have diverse end uses ranging from hi-tech applications in IT & medical space to simpler, but functional applications in consumer durables, agriculture etc. Owing to its unique characteristics, ease of processing and design flexibility, there is an infinite scope of innovation when it comes to plastics. Injection Moulding, blow moulding, rotational moulding, extrusion, thermoforming, calendaring are the plastic processes which help develop new products & end uses. Thus, the scope of business opportunities for the entrepreneur is infinite.

Innovative products result from a vivid imagination. Likewise, is the development of new plastic products. There are various plastic products in the world today in many industrial sectors which have been made possible because of the properties of plastic and also its cost effectiveness. One such product which has many end uses is the high density polyethylene (HDPE) tarpaulin, commonly known as tarpaulin. HDPE tarpaulin can be used as a protective covering in sectors like agriculture, infrastructure, automobiles and also as tents, floor spreads, as a cover for machinery etc.

HDPE tarpaulin is excellent for covering products & goods thereby protecting them from moisture and dust. This multi purpose product has therefore become a boon to the Indian Industry especially in the rainy season. Versatility of the tape extruder, which makes it capable of manufacturing more products, besides the wide fabric helps the entrepreneur in diversifying his product offering.

Advantages of HDPE Tarpaulin

- It is light- weight
- > Handling is easy
- > Water proof, does not get wet or soaked
- > Can be manufactured in desired colours
- > Attractive printing

Manufacturing Process

Lamination

HDPE fabric is laminated with LDPE, LLDPE or a blend of the two. It could be a three-layer tarpaulin having one layer of woven fabric and two layers of LDPE/LLDPE coating, one each on either side. Five layer tarpaulins consisting of two layers of woven fabric sandwiched between layers of LDPE/LLDPE coating are also made.

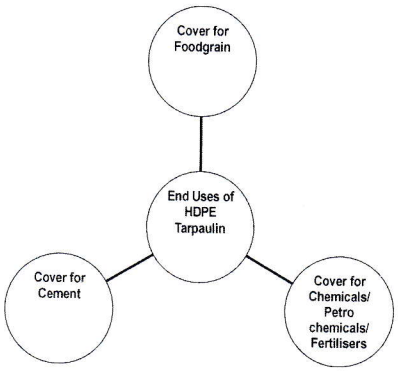
Sealing

The laminated fabric, which is normally 48 inches wide, is cut into pieces according to desired size and sealed.

Border Making

A border is made and a rope is provided along the border to provide strength. Metallic loops are used to make eyelets along the border, through which the tightening ropes are passed.

End Uses of HDPE tarpaulin



Under an umbrella of high density polyethylene tarpaulin, products remain protected against rains during the monsoons. People use it for shelter, and also as a cover for products during transportation and storage for protection.

Transportation

During the rainy season, HDPE tarpaulin is used for covering of trucks, which is a major market at present.

Storage

This is the second largest market which includes covers for Godowns, cover for crops, Mandaps or temporary sheds and out-door open storage.

Tarpaulin, which is also known as "talpatri" brings in numerous end uses in agriculture and infrastructure sectors. Tarpaulins could be used in godowns, fumigation of crops. A temporary shed could be constructed out of tarpaulins for marriages, in other places in building and construction. The demand of high density polyethylene tarpaulins revolves around both these end-use sectors, a mirror reflection of the growth in these sectors. Also, tarpaulins could be used as a cover for the chemical industry, petrochemical industry and fertilizer industry.

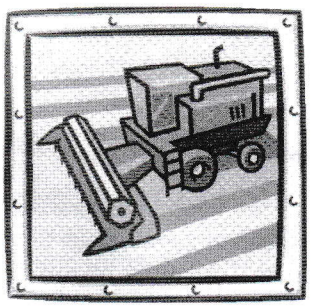
Different sectors where HDPE tarpaulin is used:

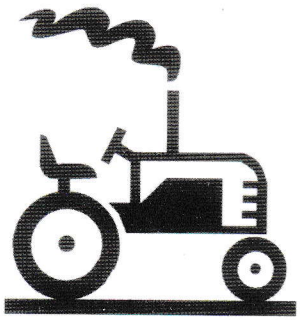
1. Agro Industry- India

Food grain Production in India – Total food grain production increased from 230.77 million tones in 2007-08 to 233.87 million tones in 2008-09.

- India is one of the largest producer of milk, fruits, pulses, cashew nuts, coconuts and tea, cotton, sugar, sugarcane, peanuts, spices in the world
- Large producer of rice and wheat in the world, and fourth largest in coarse grains
- Contributes ~25% of GDP
- ~64% Employment
- ~18% of India's exports

Plastics in Agro Industry





Also used products: HDPE Crates, PP Leno bags, HDPE Raschel bags, HDPE Agrishade Nets, HDPE Woven sacks, HDPE & PVC Pipes, LLDPE Mulch film etc.

Key Drivers :-

- Increase in population
- Higher rate of urbanisation
- Dual Income families & Economic Liberalisation
- Economic Growth

2. Infrastructure – India

Cement Production in India – India is the second largest producer of cement in the world after China. In 2008-09, India produced around 181 Million Metric Tons of cement, a growth of 7.8% over the fiscal 2007-08.

Plastics in Infrastructure

Also used products: PE Rotational Moulded tanks,

PP Flexible Intermediate Bulk Containers, PP

Woven Geotextiles, PVC Window Profiles, PVC SWR Pipes.

Key Drivers:

- India is the 7th largest country In the world & 2nd in Asia with a landmass of 3.29 million sq.km.
- 6 Mega Cities & 23 Metro cities
- 300 Large towns & 3396 small & medium towns
- Industrial, trade, commercial growth

3. Electricity Boards

Transformers are covered by tarpaulins by various Electricity Boards to avoid any accidental electrical leakage during monsoon season.

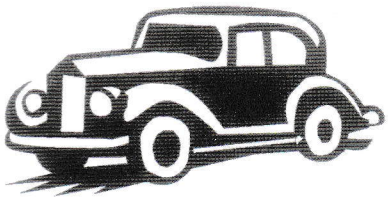
4. Automobiles

Tarpaulins are used to cover vehicles, especially during the rains.

India has become key automotive hub post liberalization.

This is due to several factors :

- Strong Competition
- Quality Conscious manufacturers
- High level of investment



- A hub for both vehicles & components

Automotive Industry

Other End Uses

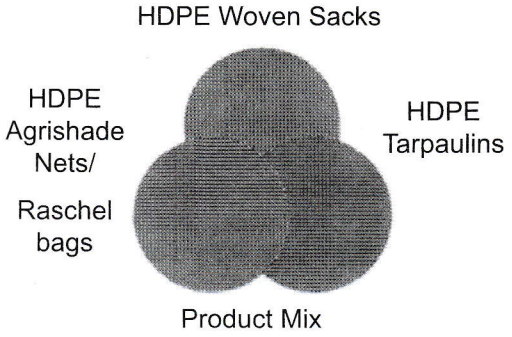
5. Used for covering sport grounds and pools

6. Use as plastic tents, floor spreads

7. For covering construction machinery during monsoon

8. As a cover in Chemical, Petrochemical, Fertilizer Industry

HDPE tarpaulin for Entrepreneurs



Tape extrusion process gives an entrepreneur the flexibility to produce HDPE woven sacks, HDPE tarpaulins and many more products such as HDPE agrishade nets and HDPE Raschel bags on the same tape extruder. Due to the seasonality of the use of HDPE tarpaulin, an entrepreneur needs to bring in this product into his business mainly in rainy season. This means that he should increase capacity utilizations during the rainy season to meet the high demand of HDPE tarpaulins.

This product mix increases the average selling price of the final product leading to a higher net profitability in comparison to manufacturing only one product, e.g. high density polyethylene woven sacks. Also high output machines would lead to higher net profitability.

Entrepreneur Development Programme of Reliance Industries Limited

This is a programme which assists projects related to polyethylene, poly vinyl chloride and polypropylene.

EDP helps take projects from concept to fruition, right from the project identification stage to Implementation Stage. EDP Cell provides market information and knowledge to help the entrepreneur achieve success.

Project Identification

ImplementationStage Market Information

Techno-commercial Project Report

Objectives:-

- To promote new plastic units based on PP, PE & PVC
- Assist entrepreneurs in setting up new units
- Identify new applications & end uses
- Facilitate entrepreneurs with all information upto erection & commisioning stage under a single umbrella
- To broaden the knowledge base of the entrepreneur
- To act as a backbone for the plastic processing industry
- To provide service to the plastic industry

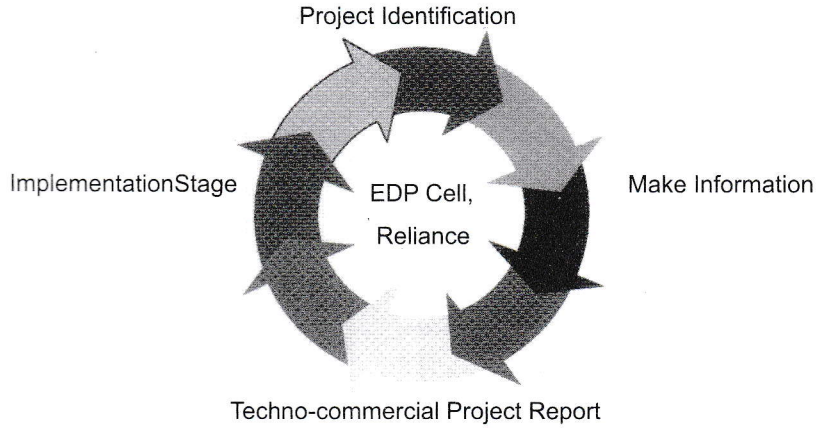
Key Functions:-

- Prepare Project Reports based on Latest Technologies
- Update Existing Project Reports
- Promote Plastic Industries at various levels
- Tap new applications/ end uses through Market Development Initiatives w.r.t.

- End User

- Processor

- Technology upgradation



Conclusion

Extrusion of plastics which was initially perceived as films extends to extruded products such as HDPE tarpaulins; both of these plastics products have a common function of preventing packed products from moisture and dust. HDPE tarpaulin, a gain to the society by its waterproof characteristic has been a gain to the existing processors of woven sacks by an increase in a product mix, increase in capacity utilization, and increase in average selling price and thus increases in net profitability.

Dow steps up performance in footwear market

Dow Europe has developed a range of materials for the manufacture of crosslinked (XL) foamed parts for the footwear industry. The work was carried out in partnership with Italy-based API, a developer of thermoplastic elastomers and polymers compounds. The compounds are based on Dow proprietary polyolefins and chemistries have been created to offer moulders of foamed parts for sports shoes, flip-flops, sandals and walking boots, the potential to create lighter weight materials that offer improved comfort combined with better durability.

These exciting developments provide a great example of Dow recognising how consumer demands translate their way back through brand owners before ending up at the moulders doorway, said Antonio Batistini,

global marketing manager for the footwear division of Dow Elastomers. The compounds offer reduced thermal shrinkage during transport and storage, as well as good colouring ability and adherence potential to substrates. Product development began in July 2009, and testing is already underway at moulders supplying some of the worlds best-known shoe brands.

We believe these new compounds could provide moulders currently using ethylene vinyl acetate (EVA) the opportunity to target traditional polyurethane strongholds, offering more market potential and enabling them to serve a wider range of brand owners needs, said Lorenzo Brunetti, vice-president, sales and marketing at API.

The materials are processed in the same way as EVA meaning no additional capital investment is required, yet they produce lower density foams with improved dynamic properties and durability, making access to higher end applications possible.

Milliken Chemical buys Rebus

Acting through a subsidiary, Milliken & Co. (Spartanburg, SC), has acquired the assets of Rebus, Inc., (Aston, Pa.) a provider of pigment and additive dispersions for the thermoset plastics and high-performance industrial coatings markets. The acquisition enables Milliken to broaden its portfolio and offer customers a source for differentiated colourants.

In particular, the move will allow thermoset and coatings manufacturers in fast-growing markets such as Asia-Pacific to leverage Milliken's global presence, technological expertise and supply chain efficiencies.

"This acquisition reinforces Milliken's commitment to our expanding thermoset plastics customer base around the world," says Russ Rudolph, global business manager of the Performance Colorants and Additives business at Milliken Chemical. "The high-quality pigment dispersions from Rebus

are an excellent complement to Milliken's Reactint polymeric colourants, offering customers a wide selection combined with applications expertise and global service capability that are Milliken hallmarks.

"The addition of these products will also provide a platform for the development of innovative new products. Further, Milliken now has the opportunity to introduce our polymeric colourants to new sectors of the thermosets market. Our combined organizations will deliver unmatched resources and new solutions for colour and additive products to customers worldwide." Milliken will continue to operate Rebus's existing 40,000-sq ft manufacturing facility in Aston.

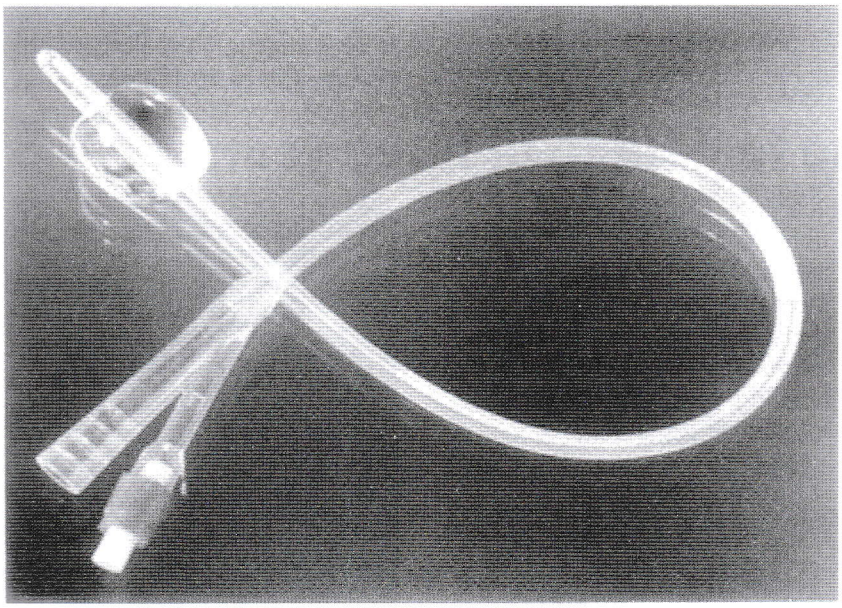
"Rebus is pleased to become part of Milliken's long tradition of product and service excellence," commented Rebus company founder, Jim Steever, who started the firm in 1992. "The depth and breadth of products and global reach of the merged organisation will benefit customers with new resources and capabilities." Steever has agreed to assist Milliken n a business development consulting role.

Eco-phones thanks to plastics

A new range of environmentally friendly mobile phones made from recycled water bottles and CD casings have recently been unveiled. These handsets are made from hard plastic, consisting of up to 75% recycled materials while some plastic components are 100% recycled. The types of plastics used in the phones and the plastics suppliers have not been announced at this stage.

These eco handsets are claimed to have a 15% lower carbon footprint than other models currently on the market. As well as recycled plastics, the handsets offer digital user manuals and significantly less packaging, saving over half a kilo of paper per unit. Technical developments have incorporated a light sensor that adjusts energy usage and an energy-saving charger.

Catheters market benefits from new medical techniques



The global market for catheters, a key sector for polymer tubing, is likely to grow to $18bn in 2009, compared with $14.6bn in 2008, according to BCC Research. In a new report, the US research group forecasts the market to reach $32.1bn in 2014, at a compound annual growth rate of 12.3%.

It said catheterization procedures have steadily increased as interventional and less-invasive procedures have become more popular. â€œCatheters are vital to the completion of many procedures, and some procedures or interventions, particularly in cardiovascular surgery and neurosurgery, could not be done without the use of catheters, said BCC.

The largest market segment is cardiovascular, where catheter sales were $6bn in 2008. That is projected to increase to $7.1bn in 2009, and then rise by an average 10.2% each year to $11.6bn in 2014.

The second-largest segment is urology, with revenue of $4.4bn in 2008. This segment is expected to reach nearly $6bn in 2009, and increase to $13.2bn in 2014, for the highest annual growth rate among all segments at 17.1%.

BCC said market growth drivers include: the emergence of newer catheters with superior efficiency and reduced risk of infection; an increase in minimally-invasive procedures requiring catheters; and advances in imaging technology that has led to new applications and an increase in procedures requiring the use of catheters.

Market restraints include price erosions due to fierce competition that are shrinking revenues, long FDA approval times resulting in delayed launches of new products, reimbursement issues, and reluctance of physicians to accept new device technologies, said BCC.

Axion offering cash prize for recycled idea

Axion Polymers has launched a design competition with a £500 cash To mark the development of its 100% recycled polystyrene sheet product, Axfoil, Axion Polymers has launched a design competition with a £500 cash prize to find the best innovative and sustainable product design using its sheet or Axpoly compound. In the first competition of its kind organised by the company, the winner will also have the opportunity to work with Axion Polymers on developing and taking their successful design to market.

Axion is seeking designs for a novel household product with mass market appeal that could be manufactured from its Axfoil or Axpoly products, which are derived from 100% recycled refrigerator plastic, TV casings or post-consumer electronic games consoles. Entries must be submitted by 8 January 2010. "Environmental impact, sustainability and potential for energy-savings are key considerations and of increasing importance for designers," said Axion director Keith Freegard. "Legislation, such as the European Eco-Design Directive 2005/32/EC, requires designers to consider these issues.

"A product made from 100% recycled plastic, such as Axpoly, that can be recycled at the end of its useful life, will have an immediate environmental advantage; saving 90% of CO2 emissions in its initial manufacture and reducing carbon impact over the product's lifecycle. "We're looking forward to receiving some really imaginative product ideas."

India's plastics use to double in three years

The consumption of plastics products in India is set to double in the next three years, according to analysts at the 50th annual general meeting of the Indian Plastics Federation (IPF). According to the organisation, current Indian plastic usage is around 6kg per annum, per person, compared with the world average of 25kg. However, increasing urbanisation will boost this figure, principally due to growing demand from the housing, automotive and retail markets.

"Plastic is now being used for housing, automobiles and retail sectors. Almost every product is now packed in plastic packets and the packaging sector is growing fast," said K K Seksaria, IPF president. India's plastics industry currently produces around six million tonnes of output a year – a figure that Seksaria predicts will grow by 1.5 million tonnes during the next six months

US compounder sees India as key growth market

A Schulman is planning a masterbatch facility in western India, an area that the company considers a "key geographic growth market". The US-based compounder and distributor has not yet determined a specific location for the facility but the firm said the facility will start with a line manufacturing masterbatch products for the packaging and consumer products markets. Its capacity is projected to be 12 million pounds per year, and production will begin within the next 12 months.

"In line with our strategic direction, we are continuing our geographic expansion in growing markets across Asia," said Joseph Gingo, chairman, president and CEO. The new plant will be the company's third manufacturing plant in Asia.

No scratching the surface of Engel coating technology

Austrian machinery maker Engel claims its Clearmelt technology for applying scratch-resistant clear polyurethane (PUR) coatings to moulded thermoplastic parts could improve both cosmetics and economics.

Demonstrated on an integrated production cell at the company's open house event in the early summer, the system uses Hennecke's existing ClearRIM wood and plastics coating system, which is adapted to supply PUR coatings on up to six injection moulding machines.

It is claimed to produce parts with brilliant depth and potential for incorporating higher added value features such as electronic sensor circuitry between the thermoplastic moulding and PUR coating. It is necessary, however, to trim the part edges and clean away mould release.

The company produced the Clearmelt mouldings on a 120s cycle time in a 1+1 cavity sliding table mould. The tool was mounted in a 280-tonne Engel e-Motion machine with Engel's own ERC linear part removal robot.

Bayer MaterialScience was a partner in the project as PC/ABS blend materials producer, Votteler provided the PUR coatings expertise, while automotive parts developer and producer Burg Design was also involved.

New acrylic process wins award

The CoverForm process, a joint development by KraussMaffei and Evonik Industries won a 'Best of' award at the Materialica trade show in Munich last month. It took the award in the category Surface and Technology for its combination of material, engineering and design.

CoverForm is a surface coating process whereby a thin, functional coating is applied to a moulded PMMA part as part of the injection moulding process, rather than in a separate, post-moulding process. The coating confers outstanding resistance to scratching and chemicals.

CoverForm cuts unit manufacturing costs by eliminating conventional process stages where the PMMA parts are removed from the mould and transferred to a separate system for cleaning and coating. In the new process, the special PMMA is injected and compression moulded, and the part cools in the mould.

The cavity is enlarged, creating a space for the surface coating. The gap thus produced is then flooded with a liquid reactive system – the surface coating – and the mould performs another compression stroke. The reactive system is produced in a KraussMaffei reaction machine docked on to the injection mould.

Foam-foil laminate adds protection to Vauxhall Astras

Vauxhall Astra cars made in the UK now come with vehicle cover panels made from Sekisui Alveos polyolefin foam and hard PP sheet. The car body protection panels are made from a foil-foam laminate; the foil withstands heavy impact without being punctured, while the Alveolit polyolefin foam adsorbs energy, said Sekisui.

The Alveolit foam features a closed cell structure and two process skins, creating air bubbles to counteract compression of soft foam. In addition, the process skins – unlike skived polyurethane foams, EDPM foams or polyolefin block foams – prevent dust, which can cause scratches on painted surfaces, entering the cells, says the firm.

Finally, the cover panels are topped with a 2.5mm thick top layer, which is thermally bonded to the other components. Thomas Ross, market manager at Sekisui, said the firm is working on other applications as well as automotive. "We are already working towards new markets such as caravans, shipbuilding and the packaging industry," he said. "The protection panels open up endless application options for the entire assembly and logistics sector."

Dow Corning launches largest online portal for silicones in India

Dow Corning, one of the leading companies in silicones, recently announced the launch of its online portal – XIAMETER for the purchase of silicone-based products. This web-enabled business was started in a bid to help customers deal with challenging economic markets and sell standard silicone products at market-driven prices.

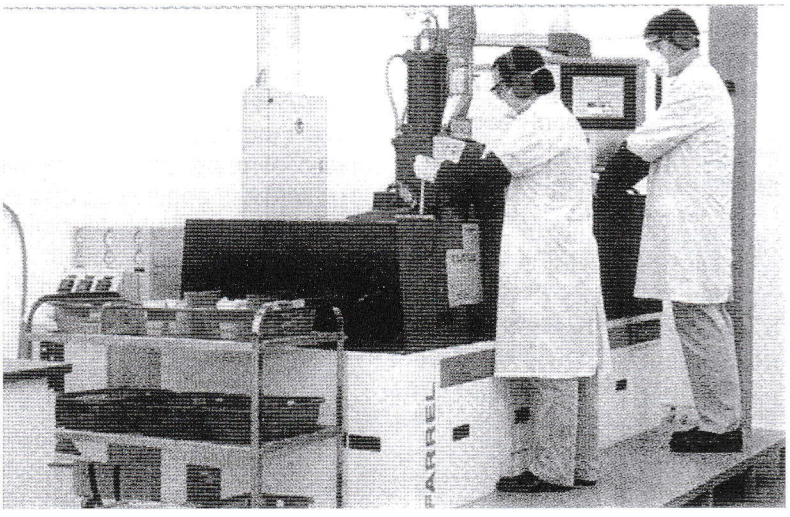
All standard silicone products manufactured by Dow Corning have been made available on this portal, and the company aims to double the products available and allow purchase of XIAMETER branded products through distributors.

"Customers want suppliers who offer efficiency. We are listening to them, and taking action by using our highly successful web. enabled brand and business to make our materials more easily accessible and offer customers greater efficiencies and convenience," said Stephanie A Burns, chairman, Dow Corning. The web platform has more than 2,100 products including silicone fluids, sealants, silanes, emulsions and rubber with enhanced self-service functionality.

LANXESS AG postpones production in Singapore

Due to the continuing global economic crisis, specialty chemicals group LANXESS AG is postponing the construction of its new butyl rubber facility in Singapore. Production is now scheduled to start in 2014. LANXESS will use the time to finish developing an innovative technology for butyl rubber production that will then be used at the new facility. The l,00,000 tonne per annum plant originally planned for Singapore, which would have cost up to Euro 400 million to build, had been due on stream in2012.

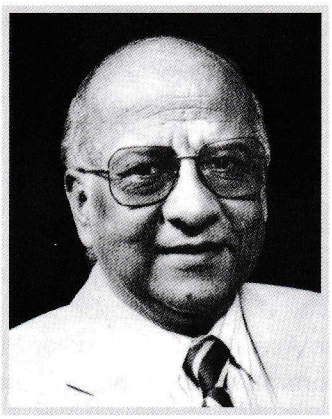
"We expect that the need for this new capacity would be felt by 2014 at the earliest," said Axel C Heitmann, chairman, LANXESS Board of Management. He further added, "Deferring the project by two years will enable us to continue development work based on a recent technological breakthrough to the point where a new process can be deployed on an industrial scale. We can then use this process in the butyl rubber production facility to come up on Jurong Island."



Development of the technology, which so far has been successfully tested only on a pilot scale, will be vigorously driven forward over the next 24 months to enable the process to be used in Singapore. The company is currently negotiating with the Singapore Economic Development Board to manage the global business of Butyl Rubber unit from there in the future.

Contd. to Page - 21

DR. SUBRATA GANGULY



Aged 77 years, completed **B.Sc.** in **Chemistry Honours** from **Calcutta University** (1950), **M.Sc.** in **Applied Chemistry 1st Class 1st** from **Calcutta University** (1952), **Ph.D.** in **Applied Chemistry (Industrial Microbiology)** from **Calcutta University** (1955). He is **recipient** of **Acharya P.C.Roy Memorial Gold Medal** and **University Gold Medal** from **Calcutta University** and **Lala Shriram National Award for 'Leadership in Chemical Industry (1983-84)'** from **Indian Institute of Chemical Engineers.**

He held Executive positions in various highly reputed Companies, viz. -

largest Chemical Company in the private sector: held positions as **Managing Director, Technical Director, Research Director and Personnel Director** between **1976** and **1982.**

1983-1988 : He was **Chairman & Managing Director** of **Indian Petrochemicals Corporation Ltd.** (A Govt. of India Undertaking) between 1983 and March 1988.

1986-1988 : He was **Chairman** of **Engineers India Ltd** (A Govt. of India Undertaking) from 20.03.1986 to 30.06.1988.

1988-April 2000 : From 01.11.1988 to 31.03.1996, he was **Executive Vice Chairman & Managing Director** of the **Associated Cement Companies Ltd. (ACC)** from 01.04.1996 to 1998, he was **Executive Vice Chairman** and from 1998 to April 2000 he was **Vice Chairman** of ACC.

Since then till February 2002, he has been **associated with various Companies** viz. Eternit Everest Ltd., Bridgestone – ACC India Ltd., West Bengal Electronics Industry Development Corporation Ltd., Indian Institute of Management, Calcutta, West Bengal Asset Management Company, Birla VXL Ltd., RBI, Eastern Area Local Board, as **Chairman / Director**.

He has **Membership** of various **Trade and Professional Associations**, viz. **"Fellow"** of **Plastic & Rubber Institute, London**, **"Fellow"** of **Indian Institute of Chemical Engineers**, **Member** of **The Institute of Materials UK**, **Member** of **Indian Science Congress Association.**

In recognition of his contribution to **Indian Plastics Institute** as well as towards **Plastics Industry as a whole**, the **Governing Council of Indian Plastics Institute** has decided to **felicitate him with an "*Honorary FIPI*' Award.**

IPF Congratulates six stalwarts of the plastics industry for being Recognised with the Highest Honour of FELLOW (FIPI) by The Indian Plastics Institute on 30th April 2010 at The Silver Jubilee Ceremony of the Institute held at The Bengal Club, Kolkata. A short resume of the awardees is given.

SHRI SOURABH KHEMANI

SOURABH KHEMANI is a **Third generation Practical, Application Polymer Engineer.** He has over **29 years** of hands on experience in the **Plastics Industry** and has **received training in reputed companies like DuPont (USA), and ICI (UK).**

He is the **Managing Director & CEO** of **National Moulding Co. Ltd. (NMC)** and also on the Board of several other Companies.

He is the **Founder** of **The JoshGROUP**.

He is a **Member** of the **Society of Plastics Engineers (USA)** and a **Governing Council Member** of the **Indian Plastics Institute.**

After serving on the **National Executive Council (NEC)** of **Plastindia Foundation,** the Apex body of all major Plastics Associations of India, during **2003-2006** as a **Member,** heÊbecame the **Protocol Committee Chairman** in the **Foundation's NEC** during **2006-2009.** Now, he is on the **Managing Committee** of the **Foundation** for the term **2009-2012.**

He has **unanimously** been **Elected** as the **28th PRESIDENT** of the **INDIAN PLASTICS FEDERATION (IPF)** in its **51st year of establishment.**

His family has the **Rare Honour** of serving the **Plastics Industry & the Federation** for **3 generations.**

His **Grandfather** was the **Founder Sr.VP** of **IPF** in **1958** & its **2nd President** in **1961.** In later decades his **Uncle** was the **9th President** & now after serving in various capacities he has **taken Charge on 24th Oct 2009.**

He is an **Executive Committee Member** of **Bharat Chamber of Commerce.** At the Chamber he is also a **Member** of the **Standing Committees of International Trade, Industrial Infrastructure Development, Trade Reforms and State Taxation.** He is the **Chairman** of the **Indo-Thai Partnership Committee** and the **Convenor** looking after the **Plastics Industry sector.**

He is also on the **Managing Committee** of the **Indian Plastics Institute- Kolkata Chapter** and **Member** of the **Institute Management Committee** of the **Indian Training Institute** (ITI), **Govt. of India.** He is also a **Member** of the **Core Committee of The District Magistrate, Howrah,** Govt. of West Bengal, **for setting up of industries in Howrah, West Bengal.**

On the **Invitation** from the **Govt. of Thailand** he has **Presented** a **Paper** to **The Prime Minister of Thailand** at Bangkok on the **Plastics and Chemical Industries** for **early harvesting opportunities** under the **FTA.** He has served **two terms** on the **Regional Committee** of the **Plastics Export Promotion Council**, under the **Ministry of Commerce,** Govt. of India.

He is also on the **Regional Advisory Committee** of **Customs, Central Excise and Service Tax,** Govt. of India and on the **Governing Council** of **Central Tool Room and Training Centre,** Govt. of India. He is on the **Regional Advisory Committee** of **Central Institute of Plastics Engineering and Technology (CIPET),** Govt. of India.

He is also a **Member** of the **Young Leaders' Forum** of the **Indian Chamber of Commerce.**

He has **Two Patents** pending on the **Recycling of Plastics.**

Under his able guidance and leadership, in 2008, **NMC** received the **Prestigious In-House Recognition** of its **R&D Unit** at its **Dhulagarh works** from the **Department of Scientific & Industrial Research,** Ministry of Science & Technology, **Government of India,** New Delhi.Ê NMC has also received **Recognition and Support** from the **Technology Development Board,** Ministry of Science and Technology, **Government of India,** New Delhi for **commercializing Plastics Materials & Chemicals developed by him at NMC's In-House R&D Laboratory.**

He is a **Life Member** of the **IPI Kolkata Chapter** for over **15 years** and has been serving on its **Managing Committee** for over **7 years.** He has actively associated himself in the Programmes, Workshops, Seminars and functions organized by the Chapter and has been taking special interest in the issues relating to Recycling, Sustainability and the Environment.

He has attended several **National and International Conferences** on **Plastics** including the one on Recycling organized by IPI and is also the **Kolkata Chapter Representative** on the **Governing Council** at **IPI-HQ** with effect from 1st April 2009.

He hails from the **Khemani Family** who has the **distinction** of **Importing India's First Plastics Injection Moulding Machine way back in 1937.**

In **Recognition** of the **Extensive Work** done by him for the **Institute,** as well as **towards the Plastics Industry as a whole,** the **Indian Plastics Institute,** has **Conferred on him** its **Highest Award of 'FIPI'** and thus, he has joined the **Special League of "Fellow"** on the **IPI's Roster.**

Mr. Sourabh Khemani, FIPI Awardee, receiving the Award from Mr F.Pinto, Chairman, GC, IPI

DR. NRIPATI RANJAN BOSE

Aged 64 years passed B.Sc. Degree with distinction from the University of Calcutta in the year 1964. He passed B.Tech.(Chemical) & M.Tech.(Chemical) Degree from Kanpur University in the year 1969 and 1972 respectively and Ph. D.(Tech.) Degree in Polymer Science & Technology from the University of Calcutta in the year 1997.

He has worked for 8 years in various capacities as Works Manager, R & D Manager, Technical Manager and Design Engineer in Plastics industries, Paint industries, Plywood industries, Fibre reinforced polymer composite industries and resin manufacturing industries. Over and above, he has 24 years R & D experience in a National Research Institute (Central Glass & Ceramic Research Institute, Kolkata) under C.S.I.R., Govt. of India. He has published 23 research papers in various International journals, 6 research papers published in National journals, 10 research papers presented in International conferences.

He has filed 6 Indian Patents and 1 International Patent. He has supervised 2 Ph. D. students and examined 3 Ph.D. Thesis.

He has obtained Fellowship from the DST, Govt. of India for attending Trainers' Training Course at EDII, Ahmedabad, Govt. of India and awarded a certificate as National Trainer on Entrepreneurship Development Programme (EDP). He has organized 20 EDP and guided in setting up more than 70 plastics based industries in small scale sectors.

He has transferred technical know-how to two Companies. He has also rendered consultancy to various plastics based industries.

He is a visiting Professor in various Engineering Colleges and guiding students for pursuing research and publication in International Journals.

He is member of Plastics & Rubber International (At present, Institute of Materials (U.K.) since 1976. He is a life member of Indian Science Congress Association, Indian Concrete Institute, Indian Plastics Institute (IPI) and Indian Plastics Federation (IPF). He is also a member of Indian Rubber Institute, Indian Ceramic Society, and Federation of Association of Cottage & Small Scale Industries (FACSI). He is the Immediate Past Chairman of Indian Plastics Institute (IPI)-Kolkata Chapter from 2008-2010.

At present he is a Director of M/s. New Era Polyset Engineering Pvt. Ltd., and Technical Consultant of M/s. SOLS 4 All Consultants, and a Technical Director of M/s. Polyadhesives and Composite Industries, Kolkata.

With such diversified activities in the plastics fields, Dr. Nripati Ranjan Bose has served the society in various ways.

In recognition of the extensive work done IPI has decided to confer on Dr. Bose the FIPI Award.

SHRI RAM AUTAR LOHIA

Shri R. A. Lohia was **born and educated in Kolkata**. He joined his **family business in 1967** while pursuing his studies and is a **Honours Graduate in Commerce from Calcutta University**. During his apprenticeship in his family business Shri Lohia got a **good exposure to various commercial and business activities**. After his graduation in 1970 he **joined a reputed jute mill and served in various capacities till 1991.**

He left his service in the jute mill and **started his own business in flexible packaging**. He is at present the **Managing Director of Neha Impex Pvt. Ltd.**

He has been **associated with Indian Plastics Institute and Indian Plastics Federation since 1985**. He was the **Hony. Treasurer of Indian Plastics Institute (Kolkata Chapter)** and former **President of Indian Plastics Federation**. He was also a **member** of the **Managing Committee of Plastindia Foundation**, the apex body of plastics industry in India. He was the **Chairman** of **various Sub-Committees** from time to time and is at present the **Chairman of the 'Plastics in Environment'** Sub Committee of IPF and **Chairman of the 'Environment & Plastics Image' Committee** of Plastindia Foundation for the term 2009 – 12. He is also a **member** of the **Executive Committee of Indian Centre for Plastics in the Environment**.

In recognition of his contribution to **Indian Plastics Institute-Kolkata Chapter** as well as towards **Plastics Industry as a whole**, the **Governing Council of Indian Plastics Institute** has decided to **felicitate him with an "FIPI" Award.**

Mr R.A. Lohia, FIPI Awardee, receiving the Award from Mr F. Pinto, Chairman, GC, IPI

SHRI RANJIT SEN

Aged 65 years is a **Commerce Graduate** from **St. Xavier's College**, Calcutta. He has completed several **Short Courses in Financial Management, Operations Research, Material Management,** etc.

He has **over 40 years experience** in **Plastics and Packaging Industry** and **Trade**. He has wide **National and International Travel Contacts.**

He is **Executive Director, Guardian Plasticote Ltd.**, Kolkata **(An Indo American Company)** with Factories at Rampur (W.B), Vapi (Gujarat) and Silvassa (Dadra & Nagar Haveli).

He is **Past Vice President** and **Member of the Governing Council of Indian Plastics Institute** and **Former Chairman of the Calcutta Centre** of **The Plastics and Rubber Institute, London.** He has received the **National Distinguished Member Award.**

He is **Past Chairman** of the **Eastern Regional Committee** of the **Indian Institute of Packaging** and a **Member** of the **National Governing Body** of this Institute. He was awarded **Fellow** of **the Indian Institute of Packaging.**

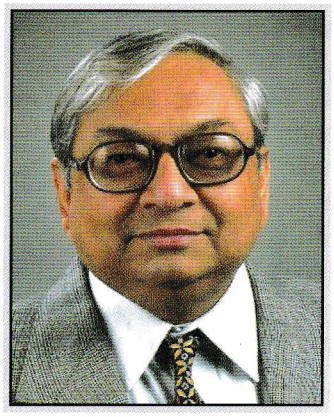
He is **Past Chairman of Indo American Chamber of Commerce (Eastern Region)** and **Past (National) President** of **Indo American Chamber of Commerce**, Offices at Bombay, Delhi, Calcutta, Hyderabad, Bangalore, Madras, Ahmedabad and Varanasi.

He is a **Member** of **The Institute of Materials Management – London**

In recognition of his contribution to **Indian Plastics Institute-Kolkata Chapter** as well as towards **Plastics Industry as a whole**, the **Governing Council of Indian Plastics Institute** has decided to **felicitate him with an "FIPI" Award.**

Mr Ranjit Sen, FIPI Awardee, receiving the Award from Mr F.Pinto, Chairman, GC, IPI

SHRI AMAR SETH



Shri Amar Seth, Joint Managing Director of Rajda Group of Companies (Kolkata) established in 1961, is **actively connected with plastic Industry since 1979**.He is **longest serving Executive Committee member** of **Indian Plastics Federation** since 1981. **Past Chairman & Secretary of Indian Plastics Institute (Kolkata Chapter)**.Also represented IPI Kolkata Chapter as **Governing Council member** for **two terms**. He is **immediate Past-Vice PRESIDENT OF Plastindia Foundation** (2006-2009) and **Trustee of The Bhawanipur Gujrati Education Society, running school and college with over 7000 students at Kolkata. Closely associated with Ramkrishna Mission Nimpith (Sunderban area). International Plastics Fair "Indplas '06** organised at Kolkata by IPF in Nov' 06--- under **his chairmanship**, had received accolades from all quarters. He had also played a very active role in success of **Plastindia '09 exhibition** during his term as **Vice President of PIF**. He was instrumental in organising **Indo -China Summit both in China (2007) and India(2009)** on behalf of **Plastindia Foundation.**

During his tenure as **Secretary, Vice-Chairman and Chairman of IPI Kolkata Chapter**, the chapter had varied activities. Emphasis was paid on organising **various Seminars** including a **National Seminar of IPI** at Kolkata which was inaugurated by Late Sri Jyoti Basu, the then Chief Minister of West Bengal. **Factory visits were organised both for members and students of IPI** organised course. Students were sent for training at IPCL Application Centre at Vadodra and CIPET Bhubneswar. Number of new members wereÊ enrolled. Evening lectures were normally held at Birla Planetarium Auditorium. As **Chairman of IPI (Kolkata Chapter)**, he had the honour of sharing the dais with the then Hon'ble Chief Minister of Assam Sri Hazarika, while delivering Key Note address at a Plastics Seminar at Gauhati .

Shri Seth has **special interest** in **environment related issues** and **higher technical education**. He is the **Chairman** of the **Centre of Excellence Committee of IPF**, where a **new centre** is being planned at **Poly Park--Sankrail** for **growth of Plastics consumption** as well as **training of students**. Mr. Seth is known and respected all over India in the plastics fraternity for his selfless services rendered to the industry.

In recognition of his contribution to **Indian Plastics Institute-Kolkata Chapter** as well as towards **Plastics Industry as a whole**, the **Governing Council of Indian Plastics Institute** has decided to **felicitate him with an "FIPI" Award.**

Mr Amar Seth, FIPI Awardee, receiving the Award from Mr F.Pinto, Chairman, GC, IPI

A Visit Report of Chinaplas Exhibition 2010

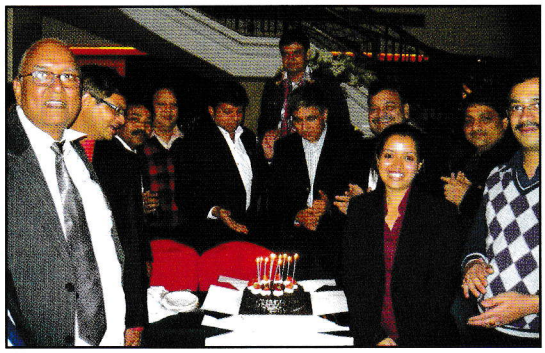
Dear Sir,

In all 28 delegates under the convenorship of undersigned visited Shanghai. Departure 16th late night with China Eastern airlines via Kunming, with representative of Orbitz, our tour facilitator. We checked in at hotel yafa longmen, a 4* hotel on 17th. In the afternoon after Indian lunch we went for city site seeing including visit to 94th floor of SWFC and then shopping at mall. On 18th also went for sight seeing. Enjoyed the ride MEGLEV, fastest train, then shopping and at night Shanghai by cruise.

On 19th reached fair ground at 9.15. IPF delegation was well received with registration and exhibitor's directory already kept ready for each delegate. Organizers had a photo session with all our delegates with IPF banner prepared by them. China plas '10 was very well organised with total 2100 exhibitors in 6 halls. Appx 400 foreign exhibitors participated. In the evening visited famous Nanjing road area.

On 20th, we had a meeting with the Asst General Manager, Ms Ada, of ADSALE, organizer of Chinaplas, since Mr Chu, Chairman Adsales was indisposed. All the delegates were welcomed and Ms Ada, addressed all the delegates with the details of exhibition and requested all of us to participate in the next Chinaplas at gunjaon. IPF memento meant for Mr Chu was handed over to Ms Ada. We dispersed after a photo session with Ms Ada. Adsales media team also took my interview wherein I had to give my impression about China plas '10. On 21st, no one wanted to visit, hence left for airport.

All the delegates were extremely happy with the arrangements. They have been given Indian meal on all the days. Offering Indian packed lunch at Fair site was very much appreciated, This was not taken care by any other visiting team like AIPMA and GSPMA. On last day Indian Lunch was provided on behalf of IPF. Orbitz had really made a very good arrangement, their representative was very very attentive and was looking after the smallest requirements of the delegates. Overall it was very well organised tour. Just for your information IPF have retained appx Rs 50000/-.



Thank you very much for giving me the opportunity to head the group.

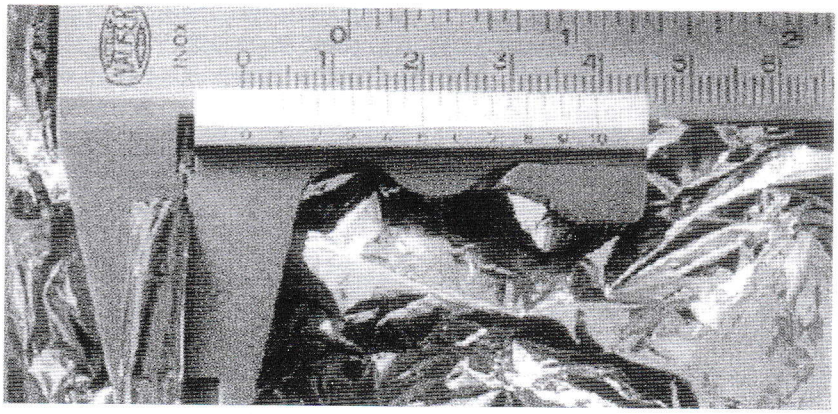
Regards,

Dipak Gathani
Convener
Chinaplas '10 Committee

Thailand's Polyplex selective about global expansion

Film manufacturer, Polyplex public Co Ltd, has put on hold S 70 million worth of projects due to uncertain market conditions. However, projects worth $ 36.64 million in projects remain underway.

According to company sources, Polyples has held up an expansion project for PET film, metalised film and PET chips. Nevertheless, it is planning a 5 19.44 million investment in a new silicone coating line. The company will decide soon whether the equipment will go to existing Polyplex plants in Thailand or Turkey.



It already has a similar coating line at its Polyplex Corp Ltd plant in India. It is also investing S 17.2 million in a cast polypropylene project in Thailand. It has arranged financing for the project, and machinery is arriving soon.

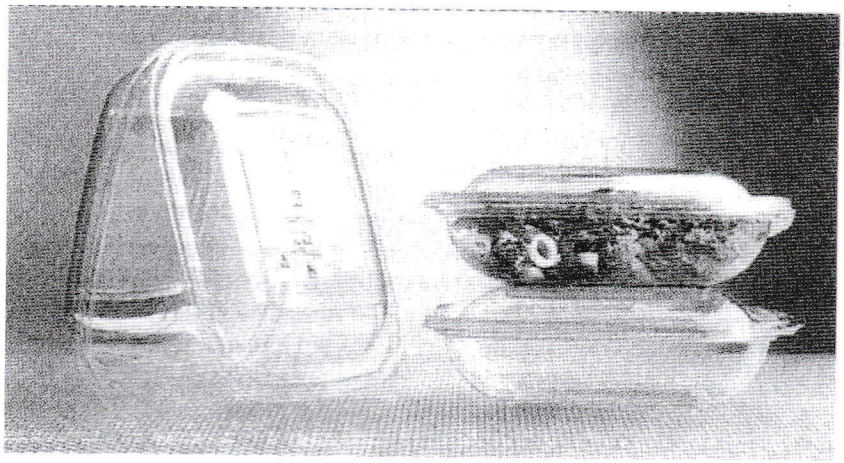
The project will have capacity to make 15,600 metric tonne a year of plain and metalised PP film. Polyplex also plans to take advantage of a reduction in duties on polyester films imported from Thailand to China under the ASEAN-China Free Trade Agreement.

Teijin to exit NatureWorks' PLA venture

Teijin Ltd has ended its involvement in the NatureWorks LLC polylactic acid (PLA) bioplastics business, transferring its 50 per cent shareholding over to its joint venture partner Cargill Inc. The move came into effect from June 30 and is part of a restructuring of the Teijin global business instigated by the economic Slow down.

NatureWorks was set up in 1997 as a joint venture between Minneapolis based Cargill and Dow Chemical Co.

Teijin took a 50 per cent share in the venture in 2007, following Dow's decision to exit the business. The NatureWorks manufacturing plant in Blair, is currently the world's largest PLA bioplastics production plant. The company recently started a second polymerisation line at the facility, taking its annual capacity to around 1,40,000 metric tonne per year. "Teijin's decision will have no effect on its day-to-day operations. And the company retains strong prospects for continued growth for its Ingeo branded bioplastic," said Marc Verbruggen, CEO, NatureWorks. Teijin sources said that the decision to exit the Natureworks joint venture was not an indication of a lack of commitment to the bioplastics sector. However, the company said that it plans to focus its commercial and technological resources in future on development of its BioFront heat-resistant PLA polymer.



Argomedtec gives legs to the disabled

For people who have lost the use of their legs, a word sounds like magic: "re-walk". It is the name an Israeli company has chosen for a revolutionary device: a wearable, motorized suit (plastic made, for lightness and comfort) that provides user-initiated mobility. Rewalk's principles are leveraging advanced motion sensors, sophisticated robotic control algorithms, on-board computers, real-time software, actuation motors, tailored rechargeable batteries and –of course - composite plastic materials.

To make a long story short, ReWalk™ is a device that helps users to walk with crutches Walk with crutches? Paralyzed persons ? Yes: they control the ReWalk suit movement through subtle changes in centre of gravity and upper-body movements. In addition to simplifying suit control, this user participation in mobility brings tangible health and emotional benefits. ReWalk™ is not just a vertical wheelchair – it restores

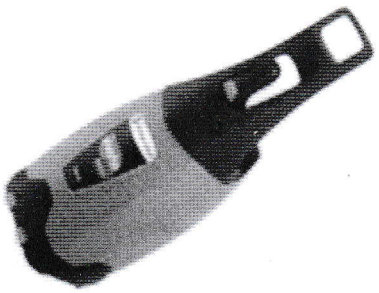
the element of control over mobility, an element wheelchair users miss painfully.

By maintaining users upright on a daily basis, and exercising even paralyzed limbs in the course of movement, ReWalk™ alleviates many of the health-related problems associated with long-term wheelchair use: urinary, respiratory, cardiovascular and digestive systems problems, osteoporosis, pressure sores and so on. In addition to relieving suffering, this has a real impact on healthcare costs – cutting yearly expenses almost in half, and enabling both insurers and individuals to redirect funds to other projects.

ReWalk™ makes standing devices, stair lifts, bed lifts, expensive powered wheelchairs – or the oversize vehicles and devices required to handle them - and other mobility assistance apparatus redundant. ReWalk™ users only need minimal additional mobility assistance – saving money and, even more important, restoring autonomy and thus self-esteem.

Technological challenge in the bottle

Its name is Shesha and it is full of Butane gas. But, it has other characteristics: it is equipped with a plastic bumper, a removable handle and castors.



The periodic inspection of pressure in accordance with ADR (regulation on the European road transport) is facilitated by dismantling in less than 10 seconds and crash tests have shown that it can withstand a drop of over three meters without any leakage.

All Shesha materials (steel and plastic envelope) are 100% recyclable. And since it is, for now, only sold in France and entirely manufactured in the country, it will generate less pollution related to transport and its carbon footprint will be minimal.

BASF hammers home advantage for Bosch drill design

Ultramid B3EG7 offered Bosch the ideal combination of rigidity and impact resistanceBosch has launched a cordless hammer drill, the GBH 36 V-LI, made of BASF's Ultramid B3EG7, a highly rigid and impact-resistant glass fibre-reinforced grade of polyamide 6.

For this challenging application, Bosch needed a resin that could withstand the loads applied to the drill during use and chose Ultramid B3EG7 because it met this requirement and also because of its impact resistance and durability. In addition, the resin is UL-listed (Underwriters Laboratories), and can therefore be used in power tools intended for the US market.

Hydraulic oil lasts longer

Shell Lubricants has produced a new synthetic hydraulic oil it claims can cut energy usage by over 13 percent in hydraulic injection moulding machines. Under development for the past two years, it has just been commercially released in Canada.

The oil, branded as Tellus EE (for Energy Efficiency), was recently tested on a Husky H-160 injection moulding machine at Niigon Technologies Ltd. (Mactier, Ont.), and the energy savings was calculated over a trial extending two weeks. The viscosity the oil maintains is a key factor in this, as is the oil's claimed ability to release trapped air 95 percent faster than conventional oils.

"The advantages of this system are key in smaller moulding machines," says Felix Guerzoni, product application specialist for rotating equipment with Shell Global Solutions (US) Inc. (Houston, Tex.). "Today, you tend to have smaller reservoir sizes on hydraulic presses, which means there is less opportunity to release the air.

"It just gets moved around. Too much air in the oil can cause premature oxidation, so being able to release that helps prolong the oil's useful life."

Two different viscosities are currently available, 22 and 46. The oil, which is produced in Brockville, Ont., is shipped in either drums or pails.

The cost is slightly higher than for conventional oils, but Shell is claiming a lifespan several times that of competitive hydraulic fluids. This, Guerzoni says, more than offsets any initial extra expenditure.

"Viscosity is maintained over a longer period of time," he says. "we have also formulated the oil to avoid any heavy metals, so it has less of an environmental impact than other products out there."

Welset launched a high grade stabilisers

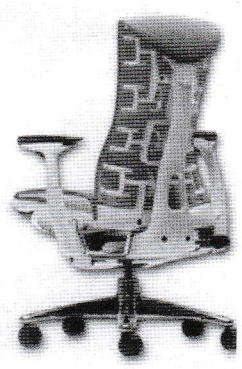
Welset Plast Extrusions, one of the leading masterbatch manufacturers in India recently launched a high grade

UV-stabilised masterbatch additive UV LifeTM. It is a premium additive that uses FDA-approved UV stabilisers in India. While meeting demanding regulatory requirements, UV LifeTM presents one of the most competitive solutions for quality product protection from UV radiations. The new masterbatch offers low water carry-over, low volatility, increase in the shelf-life of the product, FDA approved grades, reduces yellowing of product during service life and meets export requirement as per international standards.

UV LifeTM is one of the few masterbatches using FDA-approved UV stabilisers in India. While meeting demanding regulatory requirements , UV LifeTM presents one of the most competitive solutions for quality product protection.

Office chair offers comfort and support thanks to DSM

The Embody chair uses a range of DSM materials in its constructionOffice furniture company Herman Miller selected three material families from Netherlands-based DSM for the production of key elements of its Embody chair. The chair's ergonomic design is a departure from the usual ergonomics in office furniture and instead has design elements that mimic the human spine, providing support that promotes improved circulation and increased oxygenation to the brain, according to Herman Miller.



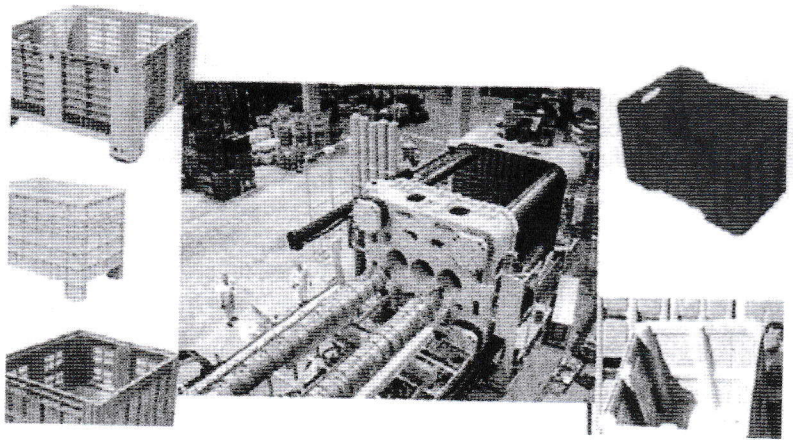
The Embody chair uses a range of DSM materials in its construction

In order to meet the design specification DSM provided Akulon Polyamide 6 for support structures, and Arnitel TPC and Sarlink TPE for seating layers. The Embody arms, arm pedestals, back frame spine, and back frame antlers, all manufactured in Akulon K224-G6U, provide structural support for the body-cradling design elements of the chair.

These parts, which require a high degree of strength, stiffness and excellent surface aesthetics, were subjected to a range of tests including impacts, drop tests, frame flexures, as well as chemical resistance of assembled chairs.

Negri Bossi launches Bi-Power machine

Italy-based injection moulding machine manufacture; Negri Bossi, recently added the Bi-PowerVH7000 to its series of bigger machines. This machine is 2g m long,5.5 m high and has platens that have an area of 4x4 m. Developed through a collaboration between Negri Bossi and Bosch Rexroth, its digital architecture and a CAN-bus system provides the machine with unprecedented flexibility & integrated diagnostics.



A simple industrial PC is used for managing every machine function, relying on 'intelligent' components, which carry out autonomous closed loop regulations, relieving the workload of the main CPU.

The VH7000 will sport the largest CAN servo valve ever produced to control the moving platen movement. This NG50 size device, supplied by Bosch Rexroth, would be capable of controlling the motion of more than .I20 tonne of mass accelerating form 0 to 0.6 m/s in 1.5 second.

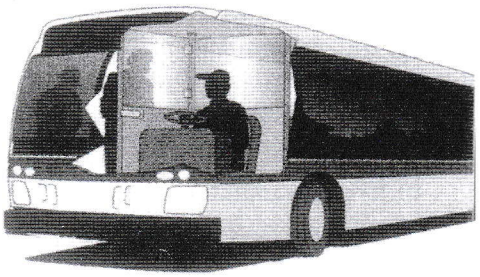
New hydraulic solutions have been implemented into the machine. When oil flow exceeds 3,000 ltr/minute, it pumps only half that figure, the rest being supplemented by the accumulator system. This represents the best compromise between performance and costs, capping overall pumps power rating. It enables a total installed power of only 500 kW instead of 1 MW if no accumulators are used.

TO SAVE CITY FROM GARBAGE & FLOODING

- DON'T LITTER ON ROAD
- USE PLASTIC BAGS ABOVE 50 MICRONS
- INCULCATE & DEVELOP DUSTBIN CULTURE
- INSIST ON PROPER WASTE MANAGEMENT
- PLASTICS SAVES NATURAL RESOURCES LIKE PAPER, WOOD, METAL, GLASS ETC.
- And finally let us agree that
- PLASTICS DO NOT LITTER. PEOPLE DO.

Exotecx* glazing shifts into high-gear production of protective shields

SABIC Innovative Plastics has introduced a new, high-tech shield to enhance the protection of transit operators in Toronto. This new high-value operator protection is made of Lexan* sheet and coated with the Exatec* E900 advanced plasma technology. The combined high impact strength and optical clarity

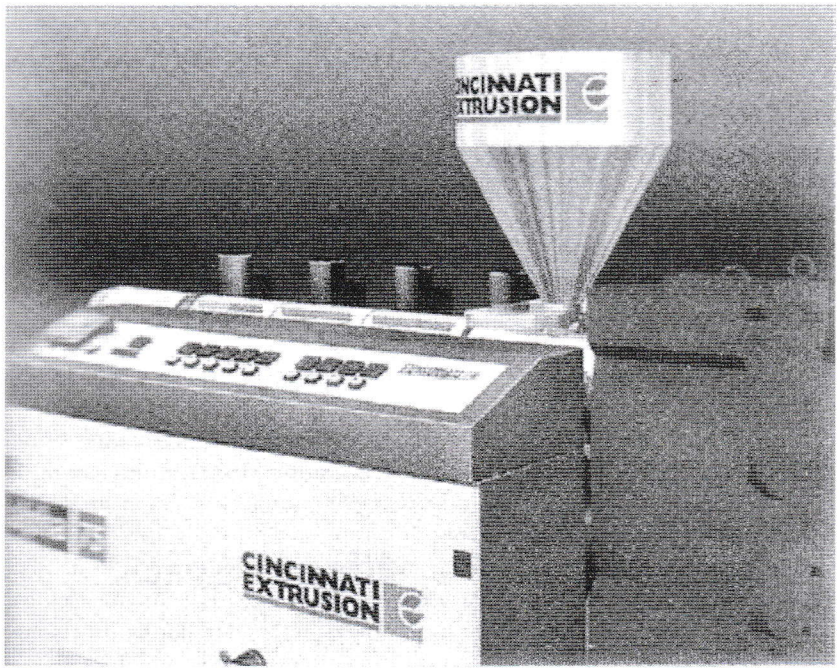


of Lexan sheet and the enhanced abrasion resistance of the Exatec* coating, led the Toronto Transit Commission (TTC) to equip its fleet with new shields to help prevent assaults on TTC operators, which average one per day. The advanced Lexon sheet/ Exatec* E900 plasma technology shield is SABIC Innovative Plastics latest example of how it is addressing critical customer needs with practical yet highly advanced material innovations.

This strong but lightweight solution also offers weight reductions of as much as 50 per cent when compared to glass, besides offering superior impact strength, abrasion resistance and overall durability versus acrylic-based panels.

Cincinnati Extrusion unveils Alpha 75 extruder

Austria-based machine manufacturer Cincinnati Extrusion GmbH recently added the new Alpha 75-258, a single screw extruder into its Alpha series. Similar to the two well-known models, Alpha 45 and Alpha 60, the new Alpha 75 offers the advantages of short lead-time' a uniquely favourable, uniform global price and high-grade technology.

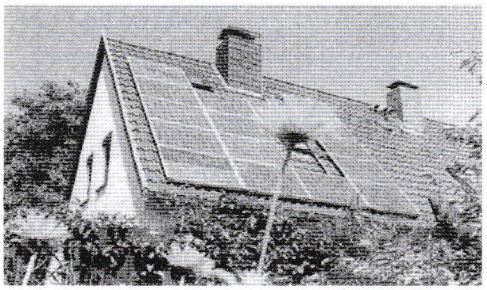


With an output of up to 120 kg/hr for polyethylene, 150 kg/hr for polyvinyl chloride and 180 kg/hr for PCIABS blends' this machine lends itself to a great variety of applications. The standard equipment package for the 75 mm extruder with smooth feed bushing and a processing length of 25 D includes a screw a control cabinet based on a relay control system (SecuRe) and a mobile, digital operator terminal. Customers can choose between a screw geometry suitable for HDPE, PP ABS' PS and PEI-, one for modified hard PVC granulate & hard PVC with filler content' and one for soft PVC granulate' In addition to soft PVC compounds, the machine can also process TPE blends.

The complete line for technical profiles consists of an Alpha extruder' a customised profile die and the Alpha protech downstream unit. This unit includes a 6 m calibration table, a belt or caterpillar haul-off for line speeds of up to 20 m/min, a cut-off assembly and tilting device. A PLC with six different languages that can be adjusted to customer-specific requirements and is operated via a 6-inch touch screen serves as control system for the downstream unit.

PolyOne promotes alternative energy

PolyOne Corporation recently announced its latest addition to its portfolio of sustainable solutions, ECCOHTM low smoke and fume, zero halogen (LSFOH) compounds for cables used in photovoltaic solar cells at NPE 2009. To produce solar energy, these cells are assembled into panels that convert sunlight directly into electricity. Solar photovoltaic technology requires specific cabling systems with zero halogen, flame-retardant insulation and sheathing layers. The outer jacket must also be resistant to moisture, sunlight, heat, chemicals and abrasion. While specifications for these cables vary by region, ECCOH 5943 complies with various standards in North America, Europe and Asia.



With these new compounds, cable producers can overcome several drawbacks common with previous products while offering a fully compliant solution. ECCOH materials, unlike TPU and TPV-based cable compounds, can be used for both internal (insulation) as well as external (sheathing) layers in cable applications, allowing solar cable producers to choose a single material.

New concept helps reduce odor and VOCs

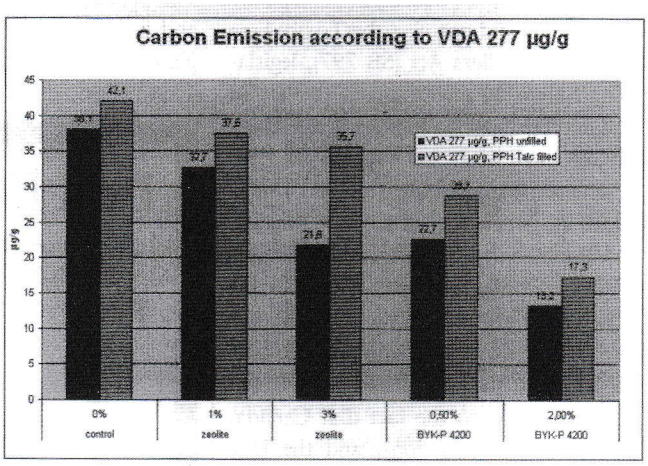
A new additive can help processors of polyethylene and polypropylene considerably reduce the fraction of volatile organic compounds (VOCs) and odors emitted during compounding of the materials and during parts' useful life. The additive binds with VOCs during extrusion, separating them from the plastic melt so they can be degassed from an extruder.

Plastics suppliers and suppliers of recycled plastics often try to reduce emissions by means of processing agents or additives that adsorb the VOCs. Although the VOCs are bound, they are still contained within the plastic and could be released under certain conditions, often exacerbated by heat and sunlight or by processing parameters such as temperatures and dwell times.

The new additive concept from BYK-Chemie works much like a stripping agent. Its molecular structure is designed so that during compounding it is active on the surface of granulate in the melt so that the VOCs are almost completely separated from the granulate. The resulting mixture of VOCs and additive carrier substance is then removed as a vapor by degassing during compounding.

Current standard practice is to use microporous materials to adsorb VOCs and odors. According to BYK-Chemie's Jörg Garlinsky, who heads its technical service group in the plastics additives division, the disadvantage of many adsorbents, such as activated carbon or zeolites (aluminosilicates), is that the VOCs or odors are physically bound to their surface. These volatiles may be freed eventually, particularly in summer when the temperature inside a car may exceed 70°C. Although adsorbents may delay the release of bound substances, they cannot prevent it entirely. Plus, adsorbents may have an adverse effect on the mechanical properties of a compound, he says.

Also used are stripping agents, such as water, nitrogen, or carbon dioxide, which are added directly into the melt during extrusion. The undesirable odors and VOCs can then be stripped out during extrusion by a degassing system, preferably



The new additive reduces carbon emissions, as shown here.

using a vacuum. The downside is the more complex engineering and the additional investments for the associated machinery.

BYK's answer is BYK-P 4200, supplied as granulate with a polypropylene carrier. It can be added to extruders similar to a masterbatch via the main feeder or a side feeder. In its first processing step, the active substance is released into the melt by shear force and heat. The pressure buildup during processing prevents premature expansion of the stripping additive.

In the second step, the stripping additive evaporates in the vacuum degassing zone, leading to greater foaming of the polymer melt. The resulting gas bubbles have a large inner surface area. This process is promoted and intensified by the surfactant additive contained in the aqueous active substance of the stripping agent. The stripping agent reduces the solubility of the volatile constituents, which are then extracted during degassing. It has been shown to function for both unfilled and talc-filled compounds.

BYK-Chemie GmbH, Wesel, Germany; +49 281-6700; www.byk.com

Bucking trend, Gabriel-Chemie adds capacity and personnel

Additional machines have been installed and staffing levels increased for the production of color and additive masterbatches at a number of the company's European sites. The supplier also plans to expand its portfolio, specifically citing additives for PET and biodegradable masterbatches based on PLA.

Six new extruders have been installed at its Austrian headquarters, increasing capacity there by about 2000 tonnes/year. The supplier says the new lines will help it branch into new products, including additional additives for PET processing and biodegradable masterbatches based on polylactic acid (PLA), a plastic derived from plant starch. Personnel, both technical and sales, also were added in the Gumpoldskirchen site.

At Gabriel-Chemie's facility near Moscow, Russia, open since April 2007, two additional compound extruders for masterbatch production have been ordered, with these to be used for production of color and other masterbatches. The new


Gabriel-Chemie has increased capacity and plans to add new materials.

lines bring that facility's capacity from 400 tonnes up to 1000 tonnes/year. The company also has opened a new sales office in St. Petersburg and a production site, also in St Petersburg, is being planned.

The sales team in Russia also has been expanded. Finally, the supplier has installed new lines for color and additive masterbatches in each of its sites in Hungary and the Czech Republic.

Gabriel-Chemie Group, Gumpoldskirchen, Austria; +43 2252-63-630-0; www.gabriel-chemie.com

Reflecting pigment range gets a brown shade

Pigments supplier Shepherd Color has expanded its Arctic range of infrared reflecting color pigments with the addition of Arctic Brown 10P895 pigment. According to the supplier, the new brown meets regulations governing packaging, food contact, recycling, and toys such as 94/62/EC, AP (89)1, AS 2070, EN 71.3, BfR, CONEG, RoHS, WEEE, ELV, and TCLP. In comparison to other dark brown pigments, it is said to have higher solar infrared (IR) reflectivity, making it a good choice in plastic applications where low heat buildup and/or exceptional durability are required. Using Brown 10P895 alone or in combination with other Arctic pigments permits formulators to create dark colors that keep their cool in strong sunlight.

Chemically, Brown 10P895 is an iron chromium brown hematite, also known as a complex inorganic color pigment (CICP), ceramic pigment, or mineral pigment. It is insoluble in most solvents and resins and will not bleed or migrate. It has good lightfastness, particularly in full tone.

The Shepherd Color Co., Cincinnati, OH, USA; +1 513-874-0714; www.shepherdcolor.com

Inroads made on use of nano-sized clay particles in films

A two-year project called nanofol, in which researchers at the Institute for Plastics Processing (Aachen, Germany; German acronym IKV) focused on the compounding and distribution of nano-layered silicates based on a particular type of clay, montmorillonit, in thermoplastics that then were extruded to thin films, could well have produced some of the answers to problems that have kept this additives' use limited.

The documented benefits of this mineral are a vast improvement in water and gas barrier performance in products into which these minerals are incorporated, as well as improvements in mechanical properties such as impact resistance. These effects have been proven on laboratory equipment. Problematic, though, is ensuring that the minerals are homogenously distributed in a plastic compound so that these positive attributes also can be realized in thin films extruded on full-scale production lines.

Because his project was funded by five companies keenly interested in the mineral's use for their own purposes, he cannot share concrete details, but Athanassios Elas, the lead engineer at the IKV on this project, did tell **MPW** that his team's work on a pilot plant, sized between a lab line and a full-scale production line, helped to better identify some of the issues that hinder effective compounding of these materials, and also may have found some solutions to counter these issues. Although the two-year funded project has ended, work on the topic will continue.

Companies participating in the project were compound extruder manufacturer Coperion, polyolefins supplier LyondellBasell, medical device manufacturer Fresenius Medical Care, and film processors RKW and Südpack Verpackungen.

Institute for Plastics Processing, Aachen, Germany; +49 241-80-93806; www.ikv.rwth-aachen.de/english.html

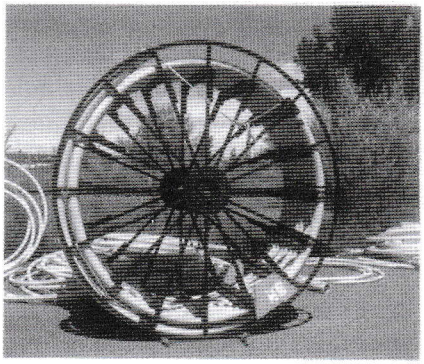
RESINS & COMPOUNDS

Polyamide pipe snags steel's business

For the first time in North America, a pipe extruded from polyamide 12 was selected to be a lower-cost substitute for steel in a natural gas pipeline. This first installation, completed in July, quickly was joined by a second one finished later in the summer.

The pipe is extruded from Vestamid LX9030 PA12, supplied by the high performance polymers division of Evonik. According to Ron Birnbaum, VP of that division, this new PA12 pipe can handle pressure to up 250 psi, so that gas distribution companies need not reduce the rate of flow. Plastic pipe long has been a less costly option to steel, and is easier to install than both steel and concrete, but getting permission for plastics' use in natural gas installations has been the exception.

According to Evonik, the transition from steel to plastic is almost a non-event for gas companies, which can use existing construction, maintenance, and operating practices, so there is no need for additional capital investment or training. The first U.S. installation of PA12 pipe was completed at Energy West in Great



Vestamid PA12 replaced steel in a natural gas pipeline.

Falls, MT in July, with three miles of the pipe installed. The occasion clearly was recognized for its importance as both federal and state pipeline safety officials, including representatives from the U.S. Dept. of Transportation, were in attendance in Great Falls to observe the installation. The second installation was at Atmos Energy in Greenville, MS.

PA12 long has seen use in fuel lines in cars and for air brake tubing in trucks. Extruded in diameters ranging from 2-6 inches, the Vestamid pipe can be extruded in lengths of 50 ft as straight pipe to more than 250 ft in coils, depending on the diameter and wall thickness.

Evonik, Parsippany, NJ, USA; +1 973-541-8000; www.evonik.com

Pick your color, get your part

To showcase its ability to swiftly supply custom-colored compounds, plastics supplier Evonik asked attendees at Germany's Fakuma trade show in October to pick a color, and then—minutes later—handed them a part molded in their tone of choice.

To master the coloring competition, Evonik promotes its Polytrend liquid colorant technology, introduced at K 2007. Polytrend is an offline mixing technology that is said to offer greater flexibility and speed than competitive systems because it allows a processor to produce selectively colored plastics and to react immediately to market requirements. It combines specially developed systems of liquid colors with an automated mixing station. This permits processors to produce the required tint themselves, cutting costs, in any required quantity, with no long lead times.

Molding of the parts was handled by Windsor, which in Germany and Eastern Europe represents injection molding machine manufacturer JSW.

Evonik also introduced the next generation of its coloring technology. Calling it Polytrend Color Infusion Plus, the supplier claims it will allow a desired color to be mixed and fed directly into a processing machine, so a user can adjust color settings during production. "Thanks to Polytrend, even small batches can be quickly and economically produced," says marketing manager Frank Huynen, "thereby doing away with the necessity of producing large batches of color. You don't need to stick forever to the color you chose. Instead, it's now possible to switch colors after a short while, or after a small number of units."

Evonik, Essen, Germany; +49 201-177-01; www.evonik.com

New grades stand the weather

New grades from Bayer MaterialScience are designed to stand up to prolonged outdoor exposure while maintaining their mechanical properties and appearance. Bayblend W90 XG is an opaque, high-flow, UV-stabilized polycarbonate/acrylonitrile styrene acrylate (PC/ASA) formulated for injection molding of applications demanding an attractive surface appearance and weather resistance for outdoor applications. Another Bayblend grade, W100 XG resin, is for use in outdoor applications in which increased thermal resistance is required. Bringing together a combination of weatherability, chemical resistance, high impact strength,

New grades stand up to all types of weather

high heat resistance, and high flow is the new Makroblend WT203 (PC/polyester) grade. Makroblend WT203 was formulated to retain its impact properties after weathering exposure for a longer time than alternative products, making it suitable to replace metal or painted plastic parts in outdoor applications that were previously thought to be unsuitable for PC/polyester blends.

Bayer MaterialScience, Pittsburgh, PA; +1 800-662-2927; www.bayermaterialscience nafta.com

Teijin starts biopolymer trial production

Plastics and chemicals supplier Teijin Chemicals Ltd. has begun producing its heat-resistant Biofront grade of bioplastic at a demonstration plant in Matsuyama, Japan. Capacity remains quite limited, but the supplier has plans for a five-fold expansion by 2011.

Biofront is a stereocomplex polylactic acid (PLA), made using a combination of conventional PLA polymer, derived from plant starch, and its enantiomer poly-D-lactic acid polymer. This structure realizes a melting point that is more than 40 deg C higher than that of conventional PLA and on par with petroleum-derived polybutylene terephthalate (PBT). Recently, Teijin has successfully upgraded Biofront with substantially improved resistance to hydrolytic degradation in hot and humid conditions, creating new opportunities for the plant-based material's use in high-heat and high-humidity applications, such as automotive and electronics. The Matsuyama plant was originally Toyota Motor Corp.'s PLA demonstration plant. Following the acquisition of the plant by Teijin in June 2008, it was relocated to Matsuyama and converted into a demonstration plant for Biofront.

Teijin has been manufacturing Biofront at a 200-ton/annum pilot plant in Iwakuni, Yamaguchi Prefecture, where it also conducts related research and development. The addition of the demonstration plant raises the production capacity to about 1000 tons annually, which the company says will enable it to begin developing a commercial market for the resin. Teijin plans to increase the annual capacity of Biofront to 5000 tonnes/year by fiscal 2011, and eventually to tens of thousands of tonnes annually.

Teijin Chemicals Ltd., Tokyo, Japan; +81 03-3506-4707; www.teijin.co.jp/english

New copolymer able to make the most of polyolefins and polyamide

Already commercial in a few applications, Apolhya is a new polymer family that combines the properties of polyamides with those of polyolefins. It offers thermal stability that beats that of polyolefins, says its supplier, Arkema, as well as greater flexibility than conventional polyamides.

According to Arkema's Dominique Jousset, Apolhya business manager, the family of materials is not composed of blends of polyolefins and polyamides, both of which Arkema offers, but is a copolymer—a comb-block-copolymer, to be precise. The properties of polyamides are combined with those of polyolefins by producing co-continuous morphologies on the copolymers on a nanometric scale.

Jousset says the material generally contains some ethylene as a co-monomer. The composition of the copolymer can vary to a large extent according to grades and applications needs, such as mechanical properties, thermal resistance, chemical resistance, or transparency requirements, she stated in response to questions from MPW.

Regardless of the composition, Arkema is able to propose nanostructured polymers, she added, with very stable morphology during further processing (injection molding, extrusion, blowmolding).

According to the supplier, the entire

Apolhya range is characterized by enhanced thermal stability compared to polyolefins, greater flexibility than conventional polyamides, and good impact resistance.

It also offers good chemical resistance and resistance to thermo-oxidization, so of particular interest for applications requiring flexibility and prolonged use above 150°C. Unlike conventional polymer alloys, its nanostructuring gives it transparency. Arkema says the halogen-free, fire-retardant Apolhya grades process more easily than crosslinked polymers. As an additive, Apolhya can be used as a compatibilizer or an adhesion promoter during the recycling of polyolefins and polyamides. It can also boost the thermomechanical properties of polyolefin-based thermoplastic elastomers, or improve the impact properties of polyamide 6 and 66 formulations.

According to Jousset, some grades already see commercial use and some other applications are also very near commercialization. For instance, an extrusion grade is used in an automotive underhood application, with the material specified due to its easy processing, high thermo-oxidation resistance, and good oil resistance. In a different application, transparency was the deciding factor as a customer was able to shift from a carbon-black-modified competitive material to a natural and transparent version of Apolhya.

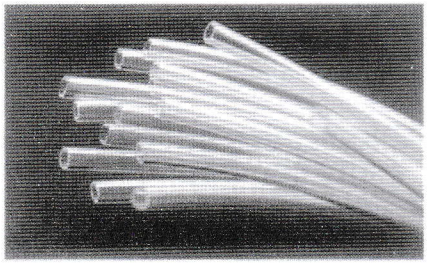
Arkema already has capacity for "tens of tons" of the material, though it would not provide detailed annual capacity.

Arkema, Colombes, France;
+33 1-490-08080; www.arkema.com

New range of TPEs positioned as PVC alternative

Introduced during the Medtec China trade show in September was a range of thermoplastic elastomers that are being marketed as a "low-extractable, eco-conscious" choice for medical tubing and other applications. Supplied by the GLS Thermoplastic Elastomers business unit of PolyOne, the Versaflex HC portfolio offers grades suitable for processing as medical tubing, gaskets, and stoppers for sheet extrusion and blowmolding applications. The materials within the range are compliant with USP Class VI, ISO 10993-4, and ISO 10993-5.

"Current concerns over phthalate-based plasticizers and other additives such as halogens have prompted customers to investigate alternatives," said Joe Kutka, technology launch manager, PolyOne, GLS Thermoplastic Elastomers, in a statement. Plasticizers are used to make rigid plastics soft—for instance, with polyvinyl chloride to extrude it as medical tubing or



Eco-conscious TPE tubing from GLS.

for PVC sheet converted into blood bags.

The Versaflex materials can be custom formulated to meet specific requirements for feel, modulus, hardness, and tactile properties.

GLS Thermoplastic Elastomers, McHenry, IL, USA; +1 815-385-8500; www.glstpes.com

New standard prompts second act for dishwasher

When changes in flame retardance standards gave it reason to seek new materials for the printed circuit boards (PCBs) of its front-loading clothes washing machines, appliance manufacturer Vestel opted to switch from a halogenated flame-retardant-filled polyamide to Noryl NH6020, a PPE/PA6 blend supplied by Sabic Innovative Plastics.

The new, tougher requirements of the International Electrotechnical Commission (IEC) 60355 standards for the testing and certification of electrotechnical equipment and components for unattended appliances prompted Vestel to change the materials used for molding of its PCBs on its washers. The Noryl grade eventually specified meets the new requirements, but without the need for chlorinated or brominated flame retardants; reducing its use of these is one of Vestel's sustainability goals.

Sabic IP offers a number of flame-retardant materials that achieved the tougher standard, which was upgraded to include Glow Wire Ignition Temperature (GWIT) testing for flammability. Because the materials have already passed compliance tests, OEMs need not conduct additional testing. Plus, said Ozgur Yilmaz, head of R&D for Vestel washing machines, the unreinforced polyamide previously used for the PCB molding had problems with warpage and needed to be processed within a narrow processing window. The new material allows for easier processing and less scrap.

Sabic Innovative Plastics, Pittsfield, MA, USA; +1 413-448-7110; www.sabic-ip.com

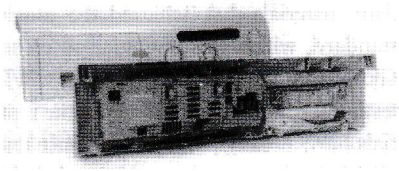
Radiation treatment gives PA grade full UL yellow card coverage

E-beam or gamma radiation post-treatment of Starflam polyamide-based specialty compounds has been shown to provide full UL yellow card coverage for various electrical device and connector applications. The efficiency with both types of radiation covers the dose range between 0 and 105 kGy. Sophie Rouif, R&D manager at French firm Ionisos, which worked with plastics supplier Sabic Innovative Plastics on testing and offers radiation treatment services, confirmed the results of the testing in questions from MPW.

The significance is that processors may be able to convince manufacturers of electrical devices and connectors to consider thermoplastics for applications requiring very high short-term heat performance. Often, thermoset plastics are used for these applications, especially with lead-free soldering a requirement for many of them.

Working with Starflam RF0067K, Ionisos reports it can optimize the material's heat stability without manipulation of the parts, directly in their packaging, via the crosslinking post-treatment. According to both companies, this makes the grade unique among thermoplastics offering a UL 94 yellow card covering the entire range and dose of crosslinking, between 0 and 105 kGy, and for both E-Beam and Gamma radiation.

According to Sabic, the crosslinked polyamide-based materials can reduce sys-



Shown are the face and backside of the Vestel washing machine's control panel.

tem costs by up to 20% vs. thermosets based on improved yields and lower cycle times. The supplier's LNP compounding division last year launched four Xtreme Starflam compounds, including two with nonbrominated, nonchlorinated flame retardants. The Xtreme LNP Starflam specialty compounds are available globally.

Sabic Innovative Plastics, Pittsfield, MA, USA; +1 413-448-7110; www.sabic-ip.com

Ticona posits alternative to SMA, PC/ABS for automotive

New to North America are a number of grades of long-fiber-reinforced polypropylene (LFR-PP) compounds from this supplier, which is promoting them as a "well-balanced" alternative to styrene maleic anhydride (SMA) and polycarbonate/acrylonitrile butadiene styrene (PC/ABS) blends in automotive instrument panels, air duct panels, and reinforcement components. The introduction is timely as SMA supply is limited, and automotive suppliers remain alert for economical alternative materials.

Ticona already has reference customers in Europe for instrument panels molded from its Celstran brand of LFR-PP, chief among them VW, but the North American market has been slower to specify the material for this and other large automotive interior applications. But with plastics and chemicals supplier Nova early this summer announcing it was exiting SMA supply, LFR-PP's chances may be good.

Ticona offers the compounds with 20%, 30%, or 40% glass-fiber content by weight. For the North American market, the compounds are supplied from Ticona's Celstran plant in Winona, MN. "Comparison tests demonstrate that Celstran+ PP can outperform SMA and PC/ABS blends across the board—heat aging, weight, part integration, foam adhesion, mechanical properties, injection molding processes, and handling," said Hansel Ramathal, product marketing at Ticona for Celstran. According to the supplier, LFR-PP offers weight and cost savings at an equal wall thickness, performs better than the other materials in low-temperature crash tests, and has superior sound-dampening properties, among other benefits.

Ticona, Florence, KY, USA; +1 800-833-4882; www.ticona.com

Bioplastics added to specialty compound families

Customer compounder RTP Co. has introduced a line of engineered bioplastic specialty compounds that utilize resins derived from renewable resources. Initial bioplastic compounds based on polyamide, polyester, and polylactic acid (PLA) are available in grades providing conductive, flame-retardant, structural, and wear-resistant value-added properties. These bioplastic compounds contain 20%-80% bio-content by weight.

"Bioplastic compounds, utilizing components derived from rapidly renewable resources instead of petroleum, are the latest element of an RTP Co. initiative to develop greener products to meet diverse industry requirements," said Andy Lamberson, corporate development manager at RTP.

Bioplastic polyamide and polyester-based compounds are available with glass-fiber reinforcement, antistatic protection, halogen-free flame retardant, and PTFE lubrication. PLA grades are combined with PC, PMMA, or ABS in hybrid formulations that increase mechanical performance and offer antistatic, flame-retardant, and structural properties. A 32% bio-content PLA/PC alloy has a notched Izod impact strength of 15 ft-lb/in (800 J/m), and a 40% bio-content PLA/PMMA alloy is optically clear. All current bioplastic grades are fully colorable to standard and custom-matched colors.

RTP Co., Winona, MN, USA; +1 800-433-4787; www.rtpcompany.com

New ASA/PA blend tops established ABS/PA

Plastics supplier BASF last month began offering sample amounts of a new material combination that brings together acrylonitrile styrene acrylate copolymer (ASA) and polyamide (PA). The material, currently designated as Terblend N BX 13043, is said to offer some advantages over the more established acrylonitrile butadiene styrene (ABS)/PA blends available.

According to the supplier, along with its pleasant haptics, good acoustic properties, and ability to precisely replicate mold surfaces, the ASA/PA blend also has greater UV stability and resistance to chemicals than ABS/PA. It also offers solid impact resistance and is easy to process.

BASF predicts the material could find ready takers in the automotive, household, and gardening sectors, where it can be processed into attractive parts that do not require coating. Full commercialization of Terblend N BX 13043 is planned this year.

BASF, Ludwigshafen, Germany; +49 621-600; www.basf.com

PURGING COMPOUNDS

Asaclean adds chat function to website to boost service

Purging compound supplier Sun Plastech Inc. has added a live-support chat functionality to its Asaclean website. The new live-support button allows visitors to ask questions about Asaclean products, technical issues, and current order and payment status, among other topics. Once the button is clicked, the visitor is directed to a communications window and transferred to the appropriate department based on the question. Sun Plastech says the new function is yet another feature added to its website to improve the company's customer service. In addition to offering free product samples and video of company leaders, the site also links to Asaclean's Twitter account.

Sun Plastech Inc. manufactures and distributes Asaclean purging compound in more than 50 countries.

Sun Plastech Inc., Parsippany, NJ, USA; +1 800-787-4348; www.asaclean.com

Heavy weights in a light-weight world

Steadfast on price in challenging times

The slowdown in automotive production and sales has resulted in dramatic demand declines for many suppliers of plastic components across the world, even in the lower cost previously high growth economies of Asia.

During 2008, 52.9 million vehicles were produced globally, down 3.7% on 2007. Although the decline for 2009 is projected to slow to less than 2%, a figure which incorporates continued steady growth in Asia, it has been a tough 15 months for the industry.

Paul Compton, Executive Vice-President, says JSP has been feeling the pinch

"*JSP* has been feeling the pain, as has the entire supply chain, of the slump in demand for new vehicles," says Paul Compton, *JSP*'s Executive Vice-President and Chief Operating Officer (Europe). "Overall, no one would choose to be where we are; demand levels are lower, but we are seeing the beginnings of recovery."

Input costs for P-Block are significantly impacted by the supply/demand balance of propylene as well as movements in crude oil. Global chemical production declined by more than 10.5% during the first half of 2009 (compared with the same period in 2008) with the sectors most affected being petrochemicals, inorganic basic chemicals and polymers including specialities.

Initially, the effect of the economic downturn was to depress oil prices and remove inflationary pressures that had seen raw material prices rise dramatically over the first half of 2008. But despite the spectacular oil price falls of December 2008, the oil price reached a 2009 high in October and continues to remain buoyant. By reducing the amount of PP purchased from the chemical companies, *JSP* says that the plastics sector, like other users of specialities, has reduced its bargaining power and been forced to pay higher prices.

JSP asserts that pricing initiatives without the true cost advantage, cannot secure business in the long-term and the inevitable retaliations just serve to lower average prices, further destabilising all participants.

"Price reductions are a short term remedy. Any gains made in the first year are usually eroded as one's competitors fight back. Typically, price war participants end with a similar share at the start but with universally lower profit margins," says Compton. "Significant cost advantages do not exist between manufacturers and while there may be some geographic cost differentiation between moulders, this is more than offset by proximity to customers. As such, a price war is not to the advantage of our sector, especially when the threat of business failures is so apparent."

Instead, says Compton, plastics producers need to add value. "Product price needs to reflect the attributes you bring. We enjoy mutually valuable partnerships where we jointly explore innovative new applications and I believe we are recognised and credited with being more than just a material supplier."

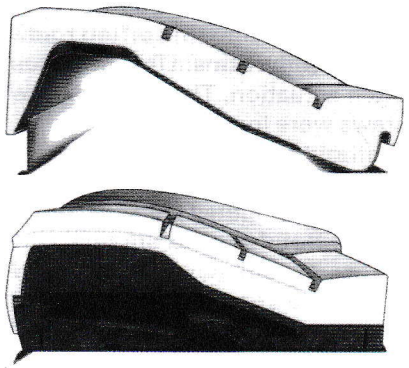
New automotive applications

The outlook is not all that bad for the supply of plastics into the automotive market. The migration of plastics into new areas of the car has been gathering pace over the past decade as the industry has sought increased substitutes for metals and glass.

With properties such as corrosion resistance, light weight, durability, resilience and toughness, since the 1990s, plastic resins have achieved remarkable growth at the expense of traditional materials in various automotive applications. In vehicle exteriors, plastics have found application from bumpers and radiator grilles, through mirrors and side protection strips and external bodywork.

Ten years ago, P-Block was supplied primarily as a bumper core; now it has migrated to replace heavier or more expensive materials in seat cores, head restraints, A, B and C pillars, anti-submarine ramps, roof and trunk linings, floor levellers and sun visors. There is somewhere between 600 g and 15 kg of the material in a car these days.

"Our material allows for more flexible designs with faster tooling and in many cases, it can be introduced without major redesign of sub-assemblies," says Compton. "It is also 100% recyclable so manufacturers appreciate that too. So it serves many functions: as a passive safety device, for padding and sound insulation, for weight reduction and as an environmentally-friendly material. The increased use of plastic-based parts in the cockpit means that in the case of an impact, passengers are no longer colliding with pure metal, which is not only safer for them but allows us to make increased advances in crash performance," Compton says.



Replacing the anti-submarine ramp with plastics delivers significant weight savings

Working with OEMs directly alongside the Tier 1 finished part or sub-assembly suppliers, *JSP* says it has pioneered big changes in seating applications since 2004 and this remains an area of opportunity for manufacturers and moulders.

Replacing the anti-submarine ramp – traditionally a body-in-white element – delivers a significant weight and therefore emissions and fuel economy saving. "Seat cores are an ideal candidate for substitution of metal parts, especially second or third row seats where we can see an average weight reduction of 10 kg when using P-Block, which is quite a large amount for OEMs to find in the challenge to improve fuel economy and lower emissions," adds Compton. The P-Block seat core concept has already been built into higher volume cars such as the *Volvo* XC60 in Europe as well as the US and Asian applications.

Future diversification and innovation

"This downturn is not going to go away overnight," says Compton, on the subject of long-term survival within the plastics industry. "We have two opportunities to compress the impact of the recession – penetration and diversification outside of automotive, using innovation as the catalyst."

Despite signs of some recovery, *JSP* says that it is unlikely that sector growth will come from the automotive market in the next few years. This is because even as the number of individual applications rises and market penetration might increase, the reduction in the volume of vehicles sold will continue to depress the market until such newer models become established. For its own operations, *JSP* has already identified many diversification opportunities outside the automotive sector.

The company also sees similar growth potential in surface applications. "P-Block's strengths are well documented, but while it is available in any colour, its aesthetics have, until now, hindered acceptance of the material where the consumer or user would have direct contact. When used in the door pillars of a car, for example, the OEM uses additional soft trim. Imagine how attractive P-Block will be if it could eliminate material, ease the assembly process and improve manufacturing cycle time," explains Compton.

The new surfaces are created using a flexible, 3D ceramic-based coating. This allows 100% true-to-specification design reproduction and the surfaces are wear-free. The process is competitively priced to injection moulding yet is much quicker and allows changes to be made at the last minute.

"We have been able to put limited patterns on the surface of the aluminium mould for some time but only for 2D surfaces due to the difficulty of mapping the pattern accurately, due to the limitations of acid etch or mesh techniques," he adds. "Our new technique, using a thin and porous ceramic layer on top of a sintered metal tool, enables the full 3D moulding capability to be given an intricate and high quality surface," concludes Compton. ◆

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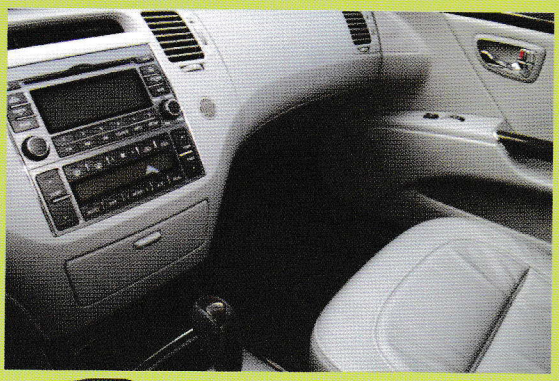

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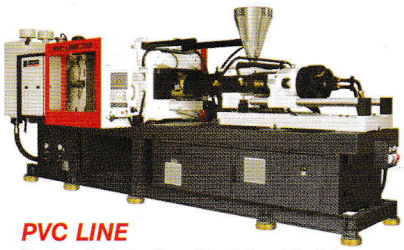

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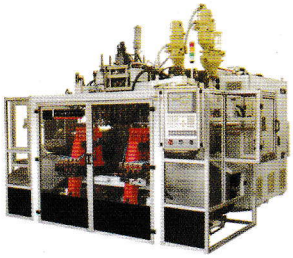

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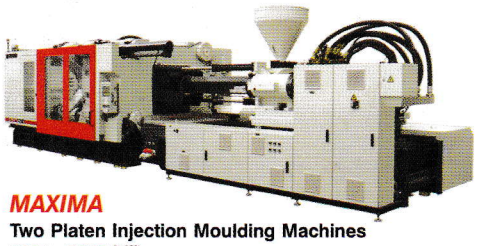

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