



PLASTICS INDIA

AN OFFICIAL ORGAN OF INDIAN PLASTICS FEDERATION

Log on to our Website : www.theipf.in or www.indplas.in



IndianOil

Petrochemicals...

holding the key to moulding tomorrow

For Polymer Products : PP, HDPE, LLDPE manufactured by
Indian Oil Corporation Limited

Please Contact: Del Credere Associate cum Consignment Stockist

UMA PLASTICS LIMITED

An ISO 9001:2008 & ISO 14001:2004 Certified Company

Regd. Office : 14 B, Camac Street. Kolkata - 700017. India

Phone : +91-33-22810775 / 6967. Fax : +91-33-22813961

Mobile: +91-9830142233. Email: polymers@umagroup.in



Exclusive Range of Plastic Moulded Furniture for Exclusive Lifestyle

Visit us at : www.umaplastics.com & www.swagathfurniture.com

SHRACHI RENU POLYMER



SHRACHI



Products Details

Colour Master Batch • White Master Batch
Calcium / Talc Filled PE Compounds
Additive Master Batch • Any Other Plastic Compounds

User Industries

Woven Sacks (Raffia) • Films / Tarpaulines • Water Tanks
Non Woven Fabrics • Plastic Carry Bags

Aiming and Delivering the Best Always

Contact Details

2, Jessore Road, Dum Dum Road, Kolkata-700 028, India
Tel : 2550 2487, Mob : 91633 63829, Fax : 91(33)2547 2044
E-mail : saket.tibrewal@hotmail.com



PLASTICS INDIA

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

President
Rajesh Mohta

Vice President
R A Poddar

Hony. Secretary
Pradip Nayyar

Hony. Joint Secretary
Ashok Jajodia

Hony. Treasurer
Hemant Goenka

Editor
Sri Pradip Nayyar

Advisors
Sri Sourabh Khemani
Sri K. K. Seksaria

Editorial Board
R. M. Maheshwari
D. K. Chatterjee
Pawan Kr. Newar
Anand Surana
Prakash Birmecha

Printed and published by Sri Ramawatar Poddar on behalf of Indian Plastics Federation and printed at **CDC Printers (P) Ltd.**, Plot No. 5,6,16 &17, Tangra Industrial Estate - II, 45, Radha Nath Chowdhury Road, Kolkata - 700015, Phone : 2329 8856-57, Fax : 2329 8858, E-mail : cdc@cdcprinters.com and 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.theipf.in

Editor : Sri Pradip Nayyar

- The opinions expressed by the authors do not necessarily reflect or are in agreement with the views of the Federation.
- The Federation does not accept responsibility for the correctness of news, commercial intelligence and statistics given, although every care has been taken to verify them from authentic sources. Users of same should, in their own interest, consult legal authorities and financial channels before dealing any transaction.
- All rights reserved. Reproduction without the permission of the Editor is prohibited.

Editorial



Dear Members,
Good day!

First of all, let me wish you all a belated '**HAPPY BIJOYA**'.

In my last editorial I bid adieu as editor of our journal after serving about two years. But the present office bearers headed by President, Mr. Rajesh Mohta has again appointed me as the editor of 'Plastics India' for another term which I gladly accepted. I take this space to express my sincere thanks to respectable President and Executive Committee members for having faith in me to be the editor of 'Official organ of Indian Plastics Federation'.

You are all aware that September 2011 was a month to be reckoned with compared to others. We have conducted a Technical lecture on "Innovations & Trends in Additives, compounds & Master batches by Sri. R.K. Mohanty at IPF Conference Hall on 6th September 2011 which was well attended by members. Though the Foundation stone unveiling ceremony of IPF knowledge centre at Poly Park, Sankrail, Howrah was planned on 8th September 2011, it was to be postponed at the last moment due to Chief Guest's non availability. An Interactive Session with the Pollution Control Authorities held at PCB's Auditorium at Paribesh Bhawan where Ministers and PCB's senior officials were present. The session was well attended by our members. We have also conducted an MSME awareness programme at Rotary Sadan on 13th September, 2011.

Apart from the above programmes the much awaited '**INDPLAS12**' launch was held at Indian Chamber of Commerce on 20th September 2011 followed by 52nd AGM. There was also one presentation on Predictive model for Industrial Sickness jointly organised by Indian Plastics Federation and Bharat Chamber of Commerce on 23rd September 2011 by Dr. Dilip Kumar Datta, Director & CEO, Sayantan Consultants Ltd. wherein he discussed a model for predicting sickness in Indian manufacturing industries. At last, on 28th September 2011 we had the opportunity to meet a Chinese delegation who were present at the 'India Petrochem Summit' organized by Indian Chamber of Commerce supported by IPF.

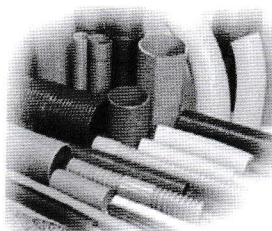
It is heartening to note that the new Government in West Bengal headed by Smt. Mamata Banerjee, who took over from Left Front has realized the importance of Industrialization. The Chief Minister and her subordinates are all out there to help industrialists who are willing to set up units in West Bengal.

Durga Puja is over now and we are awaiting for Deepawali. Let us hope this year's Durga Puja and Deepawali will bring all of us peace, prosperity and good business.

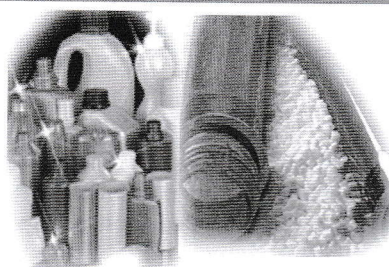
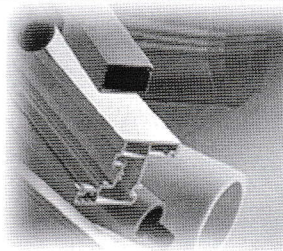
Wish you all a "**VERY VERY HAPPY AND PROSPEROUS DEEPAWALI**".

Yours truly,

Pradip Nayyar
Editor

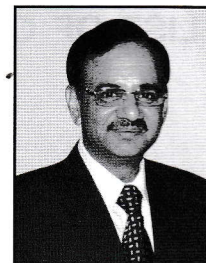


CONTENTS



- 3** Editorial
- 5** Presidential Address
- 6** Office Bearers & Executive Committee Members
- 9** Applications
- 15** Glimpses
- 26** News Round Up
- 32** Press Clippings
- 34** Monthly Circular

PRESIDENTIAL ADDRESS



Dear Members,

Wish you all '**SHUBHO BIJOYA**' and a '**HAPPY DEEPAWALI**'.

This year in the AGM the new office bearers have taken over. I take this opportunity to thank you all for electing me as the President of our esteemed Federation.

You are aware that in the last two years our journal 'Plastics India' have been published on time and all the issues have been circulated to members. I take this opportunity to convey my special thanks to the past editor and editorial board for their good job and I will try my level best to see that our journal is on your table by the end of every month.

This is my first message to you after taking over as President of our Federation. I am proud to address you all through our own journal 'Plastics India' and I am sure with your help and co-operation we will be able to carry forward the good work done by the past president and his team for betterment of Plastic trade and industry.

We are eagerly looking forward to the industrialization of West Bengal and hope that the new State Government will pro actively support our dream of having a second Poly Park in this State.

Let us work together to educate people to "**KNOW PLASTICS INSTEAD OF SAYING NO TO PLASTICS**".

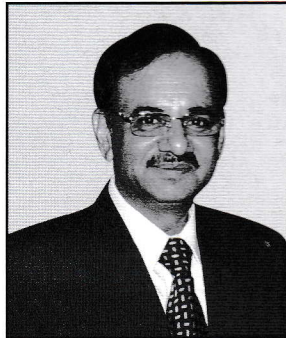
Once again wishing you and members of your family a very **HAPPY DEEPAWALI**.

With warm regards

Rajesh Mohta
President

**LIST OF OFFICE-BEARERS & MEMBERS OF THE EXECUTIVE COMMITTEE
OF THE FEDERATION FOR THE YEAR 2011-2012**

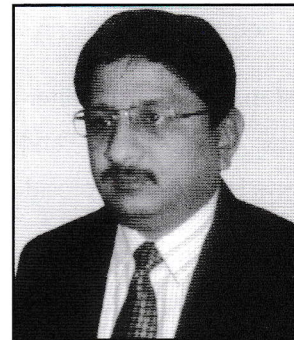
OFFICE-BEARERS



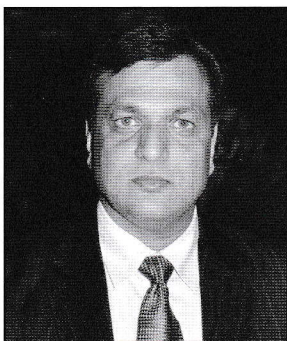
RAJESH MOHTA
President



RAMAWATAR PODDAR
Vice - President



PRADIP NAYYAR
Hony. Secretary



ASHOK JAJODIA
Hony. Jt. Secretary



HEMANT GOENKA
Hony. Treasurer

EXECUTIVE COMMITTEE MEMBERS

Producer Members

Shri S. K. Debnath	:	M/s Haldia Petrochemicals Ltd.
Shri Rajat Chakraborty	:	M/s Reliance Industries Ltd.
Shri Pawan Kr. Newar	:	M/s Prabhu Polycolor Pvt. Ltd.

Distributors Members

Shri Amar Seth	:	M/s Rajda Sales (Cal) Pvt. Ltd.
Shri Manish Tibrewala	:	M/s Fortune Polymers

Associate Members

Shri Dipak Fatesaria	:	M/s Engineers Udyog
Shri Bimal Kumar Choraria	:	M/s Jamuna Dass Bihani

Dealer Members

Shri Rajendra Kumar Bihani	:	M/s Rachana Polymers Pvt. Ltd.
Shri Bharat Shah	:	M/s Orissa Chem Pest Pvt. Ltd.

Manufacturer Members

Shri Mahendra Kumar Sharma	:	M/s Balaji Plastic Works
Shri Pankaj Bansal	:	M/s Agrico Industries
Shri Dipak J. Gathani	:	M/s Stretch Plast
Shri Naresh Kr. Agarwal	:	M/s Kushal Polysacks Pvt. Ltd.
Shri Jayant Kumar Goenka	:	M/s Unick Plastic
Shri Mohan Lal Agrawal	:	M/s Hindustan Plastics
Shri Banwari Lal Tak	:	M/s Sanchar Poly tubes
Shri Shyam Agarwal	:	M/s Sumangal Polymers (P) Ltd.
Shri Prakash Kr. Birmecha	:	M/s Accurate Turners Pvt. Ltd.
Shri Pawan Kr. Agarwal	:	M/s PBS Packaging Pvt. Ltd.
Shri Nirmal Kandoi	:	M/s Poly Packaging
Shri Deepak Himmatramka	:	M/s Raunaq Plastics Ltd.,

Co-opted Members

Mr. Anand Surana	:	M/s Everbright Plastics Pvt. Ltd.
Mr. Ashish Agarwal	:	M/s Oriplast Ltd.
Mr. Ashok Goyal	:	M/s Excellent Moulders
Mr. D. K. Chatterjee	:	M/s Haldia Petrochemicals Ltd.
Mr. Devesh Bansal	:	M/s Skipper Steels Ltd.
Mr. Jatish Seth	:	M/s Fortius Impex Pvt. Ltd.
Mr. Kabisekher Laha	:	M/s Indian Oil Corpn. Ltd.
Mr. Madanlal Agarwal	:	M/s Duroplast Extrusions P. Ltd.
Mr. Manish Bhaia	:	M/s Neptune Plastic & Metal Industries
Mr. Manish Bihani	:	M/s Synthetic Moulders Ltd.
Mr. R. M. Maheshwari	:	M/s Plastic Abhiyanta
Mr. Rohan Ghosh	:	M/s Conhyde India Pvt. Ltd.
Mr. Saket Tibrewal	:	M/s Shrachi Fiscal Services Ltd.
Mr. Shyamlal Agarwal	:	M/s Pankaj Plastic Industries
Mr. Sunil Agarwal	:	M/s Pratap Synthetics Ltd.

Past-Presidents

Shri K. K. Lohia	-	M/s Lohia Jute Press Private Ltd.	Shri R. K. Kasera	-	M/s Extrusions
Shri J. M. Khemani	-	M/s National Moulding Co. Ltd.	Shri N. K. Tibrewala	-	M/s Swastik Polymers Pvt. Ltd.
Shri S. K. Damani	-	M/s Plastic Concern	Shri R. A. Lohia	-	M/s Neha Impex Pvt. Ltd.
Shri Alok Ghosh	-	M/s Conhyde India Pvt. Ltd.	Shri J. C. Agarwal	-	M/s Pratap Synthetics Ltd.
Shri M. L. Lahoti	-	M/s Lahoti Plastic Moulders Pvt. Ltd.	Shri K. M. Tibrewala	-	M/s Tib Creations Pvt. Ltd.
Shri M. P. Periwal	-	M/s Pioneer Plastic Works Ltd.	Shri K. K. Seksaria	-	M/s Uma Plastics Ltd.
Shri B. P. Khemka	-	M/s Asiatic Plastiques	Shri Sourabh Khemani	-	M/s National Moulding Co. Ltd.

Special Invitees

Shri N. K. Surana	-	M/s Kalpena Industries Ltd.	Shri Gouri Shankar Agarwal	-	M/s Ashay Marketing Pvt. Ltd.
Shri K. K. Agarwal	-	M/s Oriplast Ltd.	Shri Subrata Sarker	-	M/s Reliance Industries Ltd.,
Shri Mahesh Singhanian	-	M/s Triveni Chemicals	Shri P. S. Mukherjee	-	M/s Reliance Industries Ltd.
Shri Suklal Roy	-	M/s Sashibhai Suklal Pvt. Ltd.	Shri Ramesh Kr. Rateria	-	M/s Rateria Laminators Pvt. Ltd.
Shri Alok Tibrewala	-	M/s Swastik Polymers	Shri K. D. Agarwal	-	M/s Shiva Polymers Pvt. Ltd.
Dr. S. K. Verma	-	M/s Kalpena Industries Ltd.	Shri A. K. Basak	-	The Plastics Exports Promotion Council
Shri Prakash Kandoi	-	M/s Royal Touch Fablon Pvt. Ltd.	Shri Pratap Ganatra	-	Chairman (IPI Kolkata Chapter)
Shri Pankaj Sinha	-	M/s Dhunseri Polymers & Tea Ltd.	Dr. P. Poomalai, Dy. Director	-	CIPET Haldia Centre
Shri Ajay Kr. Agarwal	-	M/s Balmukund Poly Plast P. Ltd.	Shri M. Kuruppasamy, GM	-	MSME (CTR & TC) , Kolkata
Shri R. K. Bihani	-	M/s Deepak Polymers Pvt. Ltd.	Shri N. N. Debnath, Director	-	Small Industries Service Institute
Shri Sunil Marda	-	M/s Gautam Plastic & Industries	Shri G. N. Bhattacharyya, BM	-	NSIC Ltd.
Shri L. K. Thakuria	-	M/s Charu Technology Pvt. Ltd.	The Head	-	Regional Testing Centre (ER), Kolkata Chapter
Shri Prakash Kr. Khemani	-	M/s Suraj Logistrix Pvt. Ltd.	Shri Kshitiz Kasera	-	M/s Extrusions
Shri Gopal Agarwal	-	M/s Gopal & Co.	Shri S. P. Jhunhunwala	-	M/s Alom Poly Extrusions Ltd.
Dr. S. K. Dhara	-	M/s Haldia Petrochemicals Ltd.	Shri Prabhat Agarwala	-	M/s Lily (India) Pvt. Ltd.
Shri S. P. Somani	-	M/s Ko-Hi-Noor	Shri Jagat Banthia	-	M/s Z. A. Polymers Pvt. Ltd.
Shri Rohit Anchalia	-	M/s Prime Prints Pvt. Ltd.	Shri Arjun B. Dhawan	-	M/s Prem Chemicals
Shri Abhishek Goel	-	M/s Essel Kitchenware Ltd.	Shri Aquil Ahmed	-	M/s Tower Rubber Products
Shri L. N. Bihani	-	M/s Synthetic Moulders Ltd.	Shri Niraj Ladha	-	M/s Harshit Polymers (India) Pvt. Ltd.
Shri Dipak Jalan	-	M/s Linc Pen & Plastics Ltd.	Dr. S. K. Nayak	-	Director General, CIPET, Chennai
Shri Sandeep Agarwal	-	M/s Sangeeta Industries			
Shri Sushil Sethia	-	M/s Sethia Polymers			
Shri Sisir Jalan	-	M/s Jalan Industrial Corporation			

Sub-Committees and their Chairmen

Administrative, Finance & Infrastructure Development	:	Shri K. M. Tibrewala	Plastics in Environment	:	Shri Sourabh Khemani
Constitution Amendment	:	Shri Ramawatar Poddar	Poly Park	:	Shri J. C. Agarwal
Editorial Board & Public Relations	:	Shri Pradip Nayyar	Programme	:	Shri Sourabh Khemani
Finished Products	:	Shri R. M. Maheshwari	Raw Materials	:	Shri Ashok Jajodia
Indplas'12	:	Shri Amar Seth	Taxation	:	Shri K. K. Seksaria
IPF – Knowledge Centre	:	Shri Amar Seth	Technical	:	Shri Rohan Ghosh
Membership Drive	:	Shri B. K. Choraria	Website & Information Technology	:	Shri Jatish Seth
Pipes, Tubes & Profiles	:	Shri Shyamlal Agarwal	Woven Sacks	:	Shri Naresh Agarwal (Kushal)

Types of Extruder Screws



Dr. S. T. Mhaske

Assistant Professor, Polymer Technology,
Dept. of Polymer and Surface Engineering,
Institute of Chemical Technology, ICT (formerly UDCT)
International Research Publication: 15
Peer review Journal: 38
Research Grant: 185 lakhs



Mr. Pravin G. Kadam

Dept. of Polymer & Surface Engineering,
Institute of Chemical Technology,
Matunga, Mumbai-400019, India

Introduction

Extruder is widely used processing machine in polymer industry. It is a very basic process. It is a process with low cost of melting, delivering & forming. Extrusion dominates in producing continuous parts like rods, tubing, film etc. it is also used to apply insulation & jacketing to wire and cable, coating substrates like paper, foil & cloth. In blow molding extrusion is used to form parison.

We are very much familiar with the screws used in extrusion i.e. single screw and co- and counter- rotating twin screw. But do they complete the list. The answer is NO. There are many different types of extruder screws available. In this paper efforts are taken to report different types of screws and their methodology of functioning.

Brief classification of extruder types depending on screw type used

1. Screw Extruders:

- 1.1 Single-Screw Extruders.
 - 1.1.1 Melt-fed or Plasticating.
 - 1.1.2 Single or Two Stage.
 - 1.1.3 Plastic or Rubber.
- 1.2 Multi-Screw Extruders:
 - 1.2.1 Twin Screw Extruder.
 - 1.2.2 Gear Pump.
 - 1.2.3 Planetary Gear Extruder.
 - 1.2.4 Multi (>2) Screw Extruder.

2. Disk or Drum Extruders:

- 2.1 Viscous Drag type Extruder.
 - 2.1.1 Drum Extruder.

2.1.2 Diskpack Extruder.

2.1.3 Stepped Disk Extruder.

2.2 Elastic Melt Extruder.

2.2.1 Screwless Extruder.

3. Ram Extruder:

- 3.1.1 Single Ram Extruder
- 3.1.2 Multiple Ram Extruder.

Details of the extruder screws:

1. Screw Extruders:

It consists of screw rotating into the barrel pushing the molten polymer material ahead, giving extruded strands. There are two main types in screw extruders: single screw and multi-screw extruders.

1.1 Single Screw:

In this type, there is only one screw rotating into the barrel of the extruder. There are three more types into it:

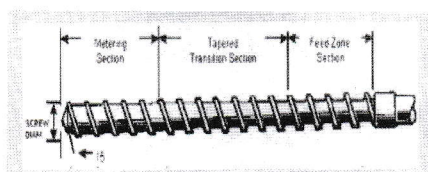
1.1.1 Melt-fed or Plasticating

Melt-fed: Machine that extrudes molten plastic without melting it is called a melt-fed extruder.

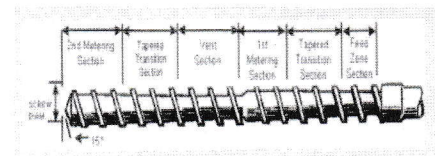
Plasticating: Machine that not only extrudes but also melts the plastic material is called as plasticating extruder.

1.1.2 Single or Two stages

Single Stage Screw: Screw has only one compression section.



Two Stage Screw: Screw has two compression section.

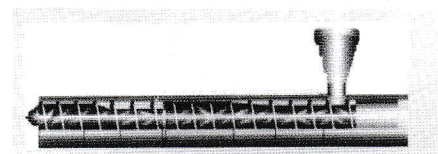


1.1.3 Plastic or Rubber:

Plastic Extruder: As the name suggests, this type of extruder is used for extruding plastics. It can be vented or non-vented.

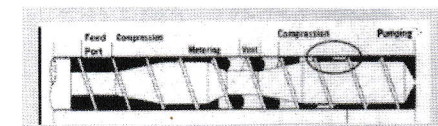
1.1.3.1 Vented Plastic Extruder:

For plastics not containing or generating volatiles. It has got venting systems arranged near to transition section of the screw, so as to remove volatiles.



1.1.3.2 Non-Vented Extruder:

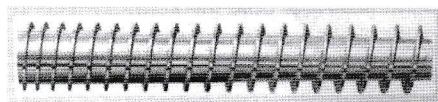
For plastics not containing or generating volatiles



Rubber Extruder: As the name suggests, this type of extruder is used for extruding rubber. There are several varieties available into it.

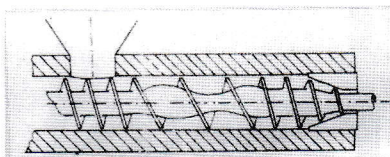
1.1.3.3 Typical Screw:

It has got constant depth with Variable decreasing pitch angle.

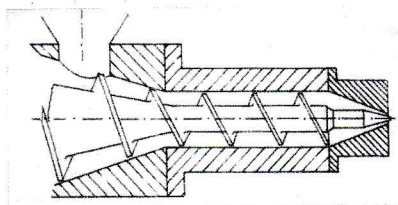


1.1.3.4 NRM Plasti-screw:

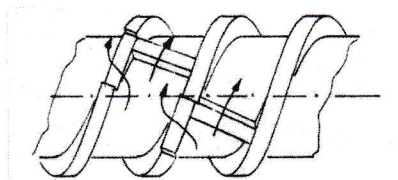
It has, both variable depth and pitch

**1.1.3.5 Pirelli Screw:**

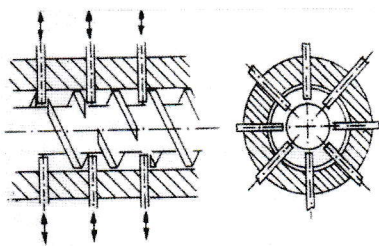
This type has large clearance between screw flight and barrel wall causing large amount of leakage over the flight improving batch-mixing capability.

**1.1.3.6 EVK Screw:**

The screw contains cross-head barriers with undercuts in flow direction, increasing shearing on flowing of the material.

**1.1.3.7 QSM extruder**

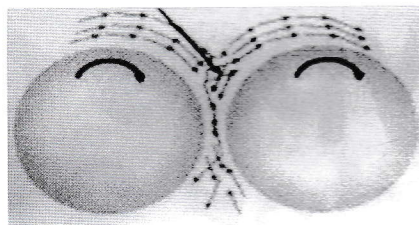
Screw flight has slots at the various pin locations giving good mixing at low stock temperature and low specific energy consumption.

**1.1 Multi Screw Extruders:**

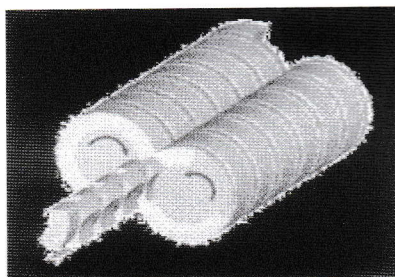
This type, has more than one screw in the extruder barrel.

1.2.1 Twin Screw Extruder:**1.2.1.1 Co-Rotating Type:**

In this type, both the screws rotate in same direction, with same speed.

1.2.1.2 Counter Rotating Type:

Both the screws rotate in opposite direction with same rpm.

**1.2.1.3 Conical Type:**

Two screws are not parallel.

**1.2.1.4 Straight Type:**

Both the two screws are parallel.

**1.2.1.5 Fully, Partially or Non Intermeshing Type:****Fully Intermeshing type:**

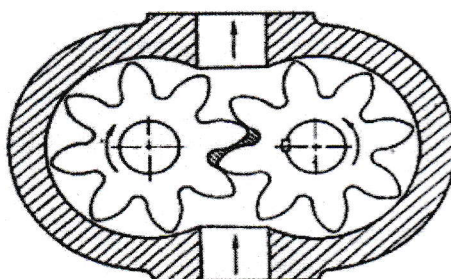
This gives very high shearing on the material and has got low L/D ratio.

Partially Intermeshing type:

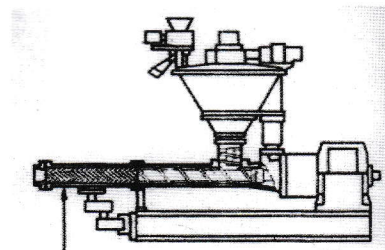
It has comparatively low shearing and higher L/D ratio.

Non-Intermeshing type:

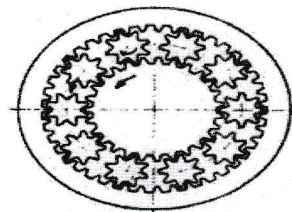
Both screws are tangential, having very high L/D ratio, giving comparatively very low shear. It is practically not used.

1.2.1.6 Pump Extruder:

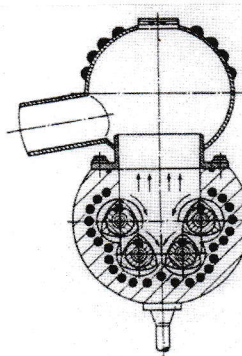
It is used at the end of the extruder; having closely intermeshing counter-rotating twin-screw extruder. Solely used for generating pressure and maintaining relatively constant outlet pressure in times of fluctuation. Mixing capacity is very less. Energy efficiency is very low (15 to 35%). Energy mainly is utilized in viscous heat generation. Temperature of material while passing through the pump increases by 10 to 30°C.

1.2.2 Planetary Gear Extruder:

planetary gear section



Similar to single screw extruder, it is with the mixing section being different. Six or more planetary screws revolve around the circumference of the main screw in intermeshing fashion. Material undergoes intensive mixing when it reaches the rolling section thus plasticating the material. Effective devolatilization, heat exchange, and temperature control is obtained. It gives minimum degradation of heat sensitive material.

1.2.3 Four Screw Extruder:

This type of screw arrangement is mainly for devolatilization of solvent from material from about 40% to 0.3%. Flash devolatilization occurs in the flash

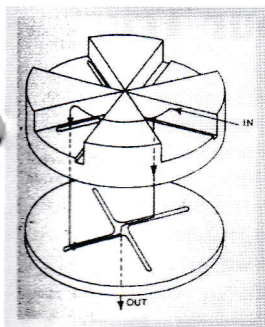
dome attached to the barrel. Polymer solution is delivered under pressure and above the boiling point of the solvent. Foamy material resulting from devolatilization is transported away by the four screws.

2. Disk or Drum Extruders:

This are the type of extruders in which the screw is in the form of disk or drum. They mainly function on the principle of pressure difference created by speed of rotation of the disks or drums.

2.1 Viscous Drag type Extruder

2.1.1 Stepped Disc Extruder:



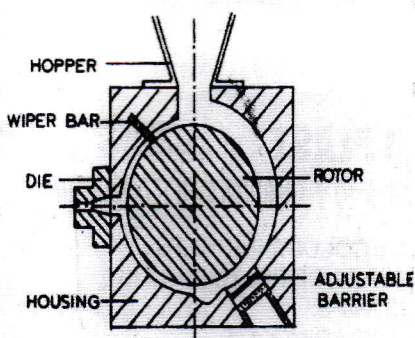
Heart: Stepped Disk positioned a small distance from a flat disk.

When one of the disks rotate with a polymer melt in the axial gap, a pressure build-up

will occur. If exit channels are incorporated into the stepped disk, the polymer can be extruded in a continuous fashion.

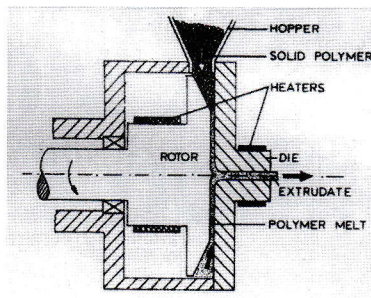
Disadvantage: Difficult to clean because of the intricate design of the flow channels in the stepped disk.

2.1.1 Disc Pack Extruder:



It is claimed that the machine can perform all the basic polymer processing operations with efficiency equaling or surpassing existing machinery. It incorporates some of the features of the drum extruder and single screw extruder. Mixing blocks and spreading dams can be incorporated into the machine.

2.1 Elastic Melt Extruder.



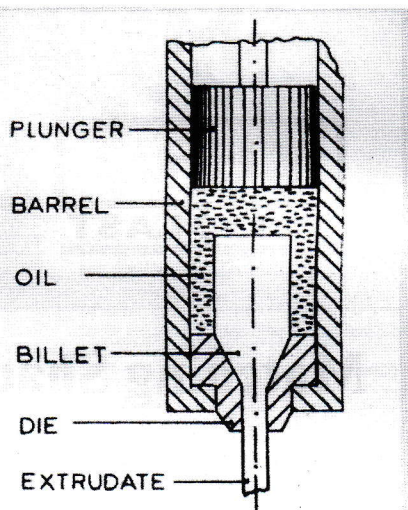
It makes use of viscoelastic properties of the polymer. When the polymer is exposed to a shearing deformation, normal stresses will develop in the fluid that are not equal in all directions and will be having centripetal pumping action thus extruding the polymer. It is interesting from the rheological point of view.

3. Ram Extruder:

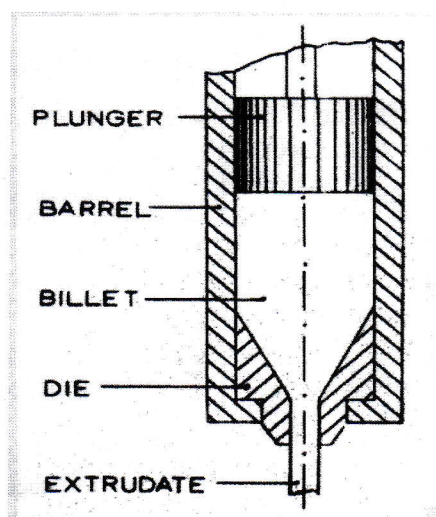
It makes use of ram pusher as the screw to push the material out of the injection barrel. Ideal for very high viscosity polymers.

3.1.1 Single Ram Extruder

It has got a single ram arrangement to push the material. The ram can be directly in contact of the polymer or it can have a medium in between to push the material. The medium can be oil, which is mainly used to minimize the friction between the ram and the inside of the barrel. In direct contact ram extruder ram is in direct contact of the material. It is ideal for very high viscosity material.



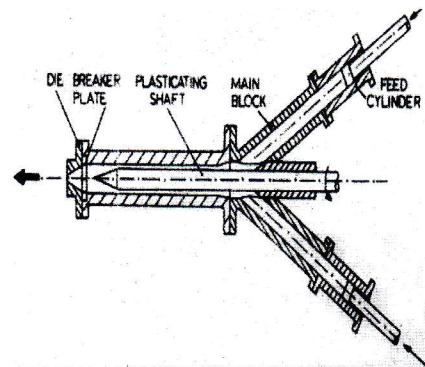
Direct contact single ram or plunger type extruder



Single ram or plunger type extruder indirectly in contact with the polymer material

3.1.2 Multiple Ram Extruder.

In this type of extruder there are multiple plungers arranged to bring about continuous process flow of the polymer material. Single ram extruder is a batch type of extruder. Multiplicity brings continuity of processing into the process.



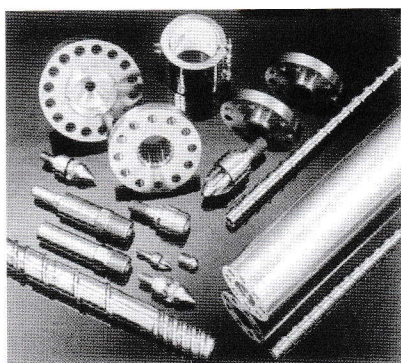
Plasticizing Range: Ferromatik Milacron India Solution Expertise



Mr. Jayesh Gandhi

General Manager,
Application & Technical Service,
Ferromatik Milacron India Pvt. Ltd.

Optimizing uniform process conditions in Injection Moulding is the key to making precise parts. FMI's original plasticizing components provide you with the decisive edge in meeting high qualitative standards in terms of the melt and plasticizing performance.



Fast, Precise, Reliable!

Three outstanding features of FMI machines to enable manufacturing of complex moulded parts in extremely short cycle times. The primary factor in the moulded part manufacturing process is the plasticizing process - the transformation of plastic granules into a processible melt form.

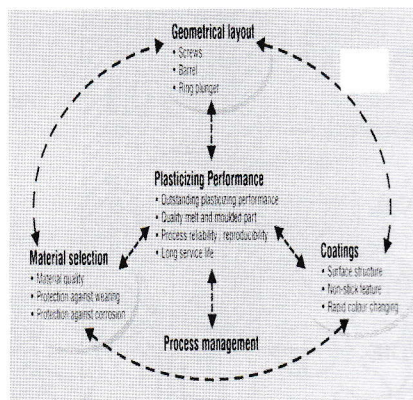
The development of a variety of new plastics, also necessitates continual adaptation and modification of the plasticizing system. Increased wear as a result of abrasion, adhesion and corrosion

due to additives in the materials, as well as constantly increasing material throughput rates and higher processing temperatures, all require maximum performance from all the plasticizing components such as barrels, screws and ring plunger.

FMI is not only a supplier of plasticizing components, but is also a partner that offers solutions that are precisely tailored to the outstanding performance of FMI machines.

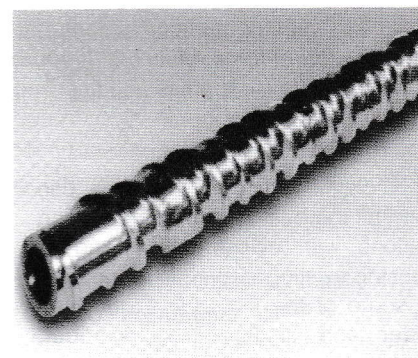
Application Technology

Spiraling demands on production in terms of cost-efficiency and quality necessitate the application of appropriate machine components, whereby plasticizing - specifically screw geometry - plays a major role. Depending on the application, optimized screw geometry may be required to process different types of thermoplastics.



For optimal melt quality, a plasticizing screw should melt and homogenize the material evenly, including the distribution of any additives. The high output of polyolefins required for packaging applications - including feed rate & melt homogeneity requirements - generally exceeds the capabilities of standard three-zone screws. High performance screws can overcome these limitations. To melt plastics, energy needs to be brought to the granulate. This energy is delivered via the heat conduction of the heater bands as well as the shearing energy of the screw action. At first a melt film forms on the barrel wall in the flow direction. The continuous screw flight movement scrapes this off and a melt pool forms in front of the screw flight. As the process continues, the melt pool between the barrel and the raw material continues to grow.

30% More Output with Barrier Screws



Contd. to Page-25

**Industrial opportunity...
International Exhibition on Plastics at Kolkata**

**meet
+ explore**

Indplas '12
meet • share • exchange • profit



6th INTERNATIONAL EXHIBITION ON PLASTICS

**SCIENCE CITY GROUND, KOLKATA, INDIA
OCTOBER 5 - 8, 2012**

- + Effective penetration in a market of 500 million people in Eastern India
- + Sale of products in one of the world's fastest developing economy
- + Live demonstration of machineries and equipments

Jointly Organised By:

ipf Indian Plastics Federation



PLASTINDIA FOUNDATION

Supported by :



MINISTRY OF CHEMICALS & FERTILIZERS
DEPT. OF CHEMICALS & PETROCHEMICALS
GOVERNMENT OF INDIA



aiftma



SPONSORS

PLATINUM



**Reliance
POLYMERS**

GOLD



**Mukund Poly Plast
Pvt. Ltd.**



Kushal Group



Linc Pen & Plastics Limited



**LOHIA
STARLINGER LIMITED**

**Ori-Plast
Ori-Plast Ltd.**



Supreme Petrochem Ltd



Uma Plastics Ltd.

SILVER

BÆRLOCHER
Baerlocher India Additives Pvt. Ltd.



Dinman Polypacks Pvt. Ltd.



Gujarat Machinery Pvt. Ltd.



J P EXTRUSIONTECH LIMITED



K K Polycolor Asia Ltd.



Malsons Polymers Pvt. Ltd.



Pratap Synthetics Ltd.



Rajda Group



Rajoo Engineers Ltd.



Raunaq Plastics Ltd.



Royal Touch Fablon (P) Ltd.



Servo plast



Swastik Polymers Pvt. Ltd.



Utkarsh Tubes & Pipes Ltd.

For participation please contact

Chairman - Indplas '12 Organising Committee

ipf Indian Plastics Federation

8B, Royd Street, 1st Floor, Kolkata - 700 016, India, Tel: +91 33 2217 5699 / 5700 / 6004, Fax : +91 33 2217 6005

E-mail : ipf@cal2.vsnl.net.in

Log on to : www.indplas.in or www.theipf.in

Book your Stall immediately by depositing only Rs. 11,000/- favouring Indian Plastics Federation & avail :

1. Name as Exhibitor on IPF Website with link to Exhibitor's Website, 2. Preferential selection of Stall Site
3. To avail Early Bird Discount (EBD) 25% payment of stall rent to be made on or before 31-12-2011.

For details of Stall Rent, Early Bird & Loyalty Discount visit www.indplas.in

*What is the colour of
Your Success?*

"Colouring Solutions for Plastics"

Product Range

- *AFMB - White & Natural*
- *White Master Batches*
- *Black Master Batches*
- *Colour Master Batches*
- *Special Effect Master Batches*
- *UV Master Batches*
- *Antistatic Master Batches*
- *Additive Master Batches*
- *Metallic Effect Master Batches*
- *Pearl Effect Master Batches*
- *PP Compounds*
- *Nylon Compounds - Filled & Unfilled*

PRABHU POLYCOLOR PVT. LTD.

33A, J. L. Nehru Road, 12th Floor, Suite#7, Kolkata-700 071
Phone : 033-3048 1800 / 1801, Fax : 033-3048 1802
E-mail : pknewar@hotmail.com, Mobile : 98303 01614

Works : # 13, Ponnamman Nagar, Ayanambakkam, Chennai - 600 095
Ph : 044 - 2653 3929 / 3937, Fax : 044 - 2653 3954
E-mail : prabhupoly@yahoo.co.in, prabhupoly@vsnl.net
Web : www.prabhupolycolor.com

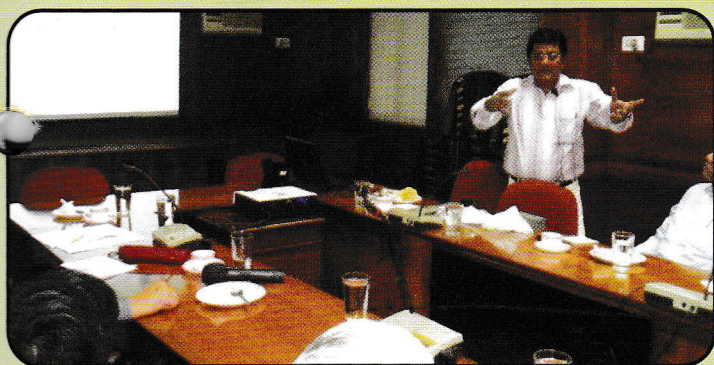
Depots : Multiplast, PUNE (93713 06850)
Lab Supplies, BANGALORE (99001 01756)



GLIMPSES

TECHNICAL LECTURE ON "COMPOSITES FOR INDUSTRIAL APPLICATIONS" ON 17TH AUGUST, 2011

Indian Plastics Federation jointly with Indian Plastics Institute (Kolkata Chapter) organised a Technical Lecture on "Composites for Industrial Applications" on 17th August 2011 at IPF Conference Hall. The presentation was made by Dr. N. R. Bose, a Special Invitee Member of IPF. The programme was well attended. Snap shots of the technical lecture are given:



TECHNICAL LECTURE ON "OPPORTUNITIES IN PLASTICS EXTRUSIONS" ON 24TH AUGUST, 2011

Indian Plastics Federation jointly with Indian Plastics Institute (Kolkata Chapter) organised a Technical Lecture on "Opportunities in Plastics Extrusions, FOCUSED on Paper 1 – Manufacture of mosquito nets and Paper 2 – Drip Irrigation Systems on 24th August 2011 at IPF Conference Hall. The presentation was made by Neptune Plastics Industries. The programme was well attended. Snap shots of the technical lecture are given:



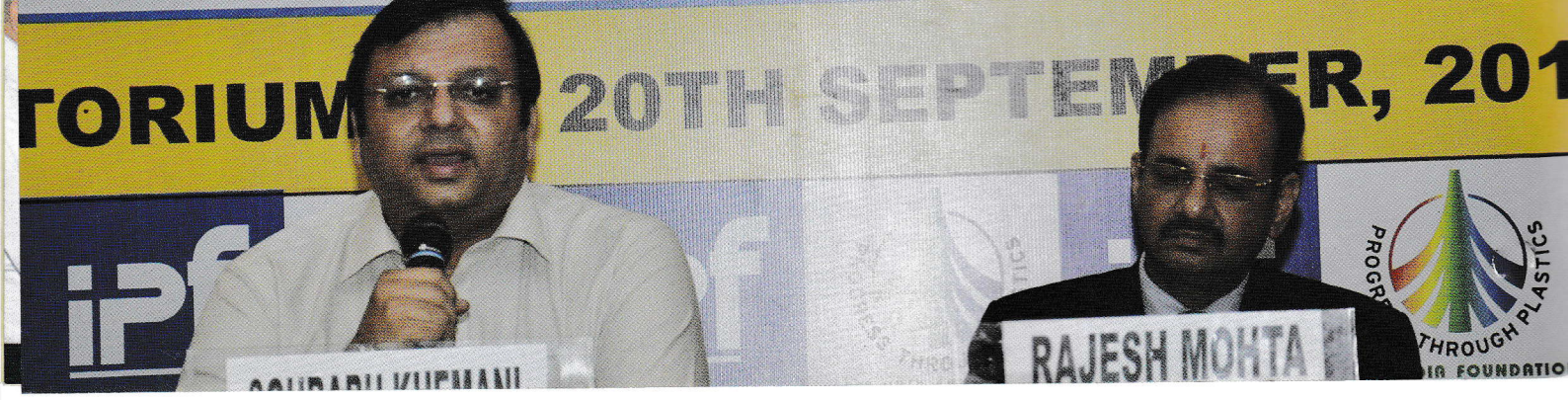
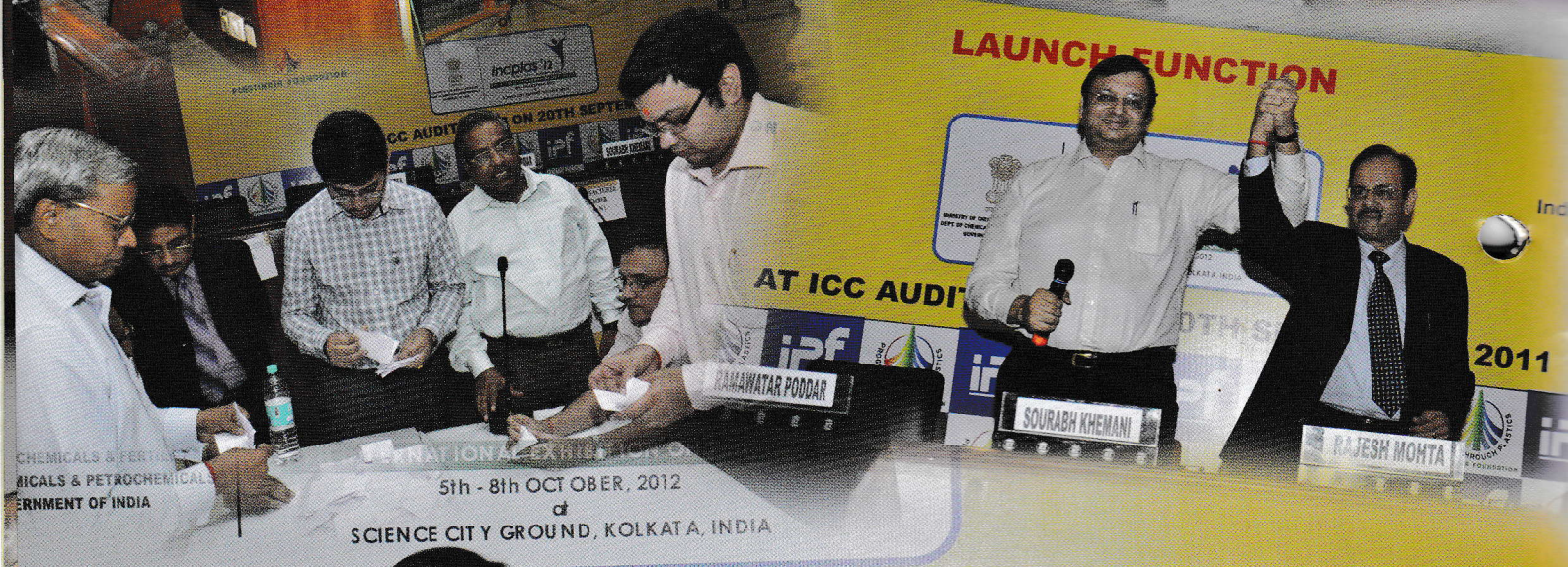
GLIMPSES
OF Indplas '12 LAUNCH FUNCTION AT KOLKATA ON 20TH SEPTEMBER, 2011







GLIMPSES OF 52ND ANNUAL GENERAL MEETING OF IPF ON 20TH SEPTEMBER, 2011



LAUNCH FUNCTION

of



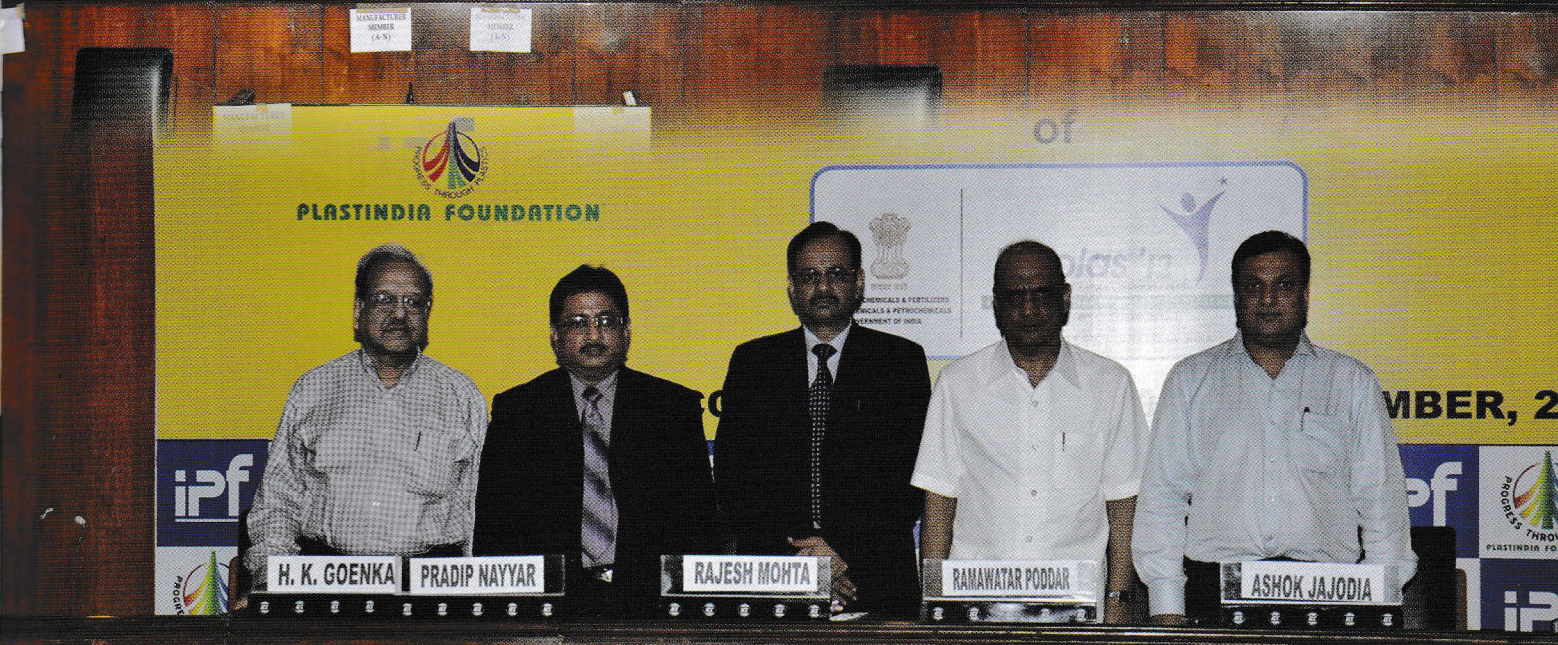
RAJESH MOHTA

SOURABH KHEMANI

ICC AUDITORIUM

MBER, 20

UDITORIUM 20TH SEPT



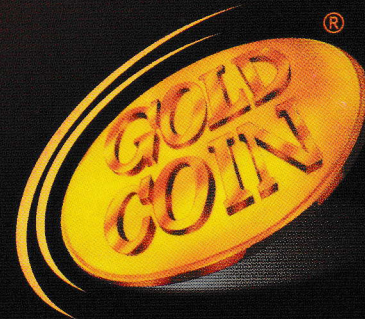
GLIMPSES

**Presentation on a model for Predicting Sickness
in Indian manufacturing companies on 23rd September, 2011
Venue: Indian Plastics Federation**

In a presentation before the members of the Industry Standing Committee of Bharat Chamber of Commerce and Indian Plastics Federation on 23rd September 2011, Dr. Dilip Kumar Datta, Director & CEO, Sayantan Consultants Ltd., discussed a model for predicting sickness in Indian manufacturing companies. He made a power point presentation on two models that he has developed. The first model gives a Discriminant score that segregate the healthy companies from sick companies. The second model predicts the future financial health of a company with 98% accuracy. He summarized how he tested the accuracy of the two models through statistical validation. The models would be useful for turnaround management and would be available to the members at free of cost. The committee members suggested a predictive model for SSI units. Dr. Datta agreed to present such model on availability of at least 10 years continuous financial data for at least 100 SSI units. Mr. Sourabh Khemani, Co-Chairman, Industry Standing Committee, Bharat Chamber of Commerce and Immediate Past President of IPF suggested interested members of the committee are likely to provide sufficient financial data for developing a model for SSI units.



A Promise To Commitment & Growing Satisfaction



● Energy Efficient Servo System



▲ Up to 1000 Tons

Total Moulding Solution!

An ISO 9001 - 2008 Certified Company

Reg. Office : "GOLD COIN" House, 775, GIDC, Makarpura, Vadodara - 390010, Gujarat, INDIA • Tel.: +91-265-2631211, 2632210

• Fax: +91 265 2638434 • E-mail: goldcoin@polymechplast.com • Mumbai: • Ph.: +91 - 22 - 28460878, Email: pmlmum@polymechplast.com

• Pune: +91 - 9890524568 / 9890655644 Telefax: +91 - 2135 - 660122 • Kolkatta: • Ph.: +91 - 33 - 22298400, Email: pmical@polymechplast.com

• Delhi: • Ph.: +91 - 11 - 65170869, 47021633, Email: pmlidl@polymechplast.com • Bangalore • Ph.: +91 - 9480321017

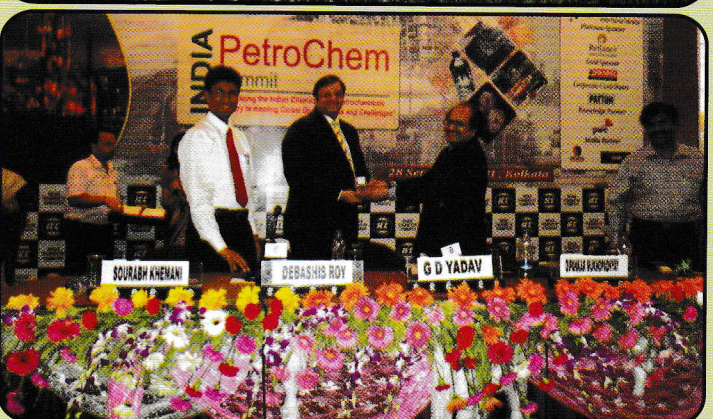
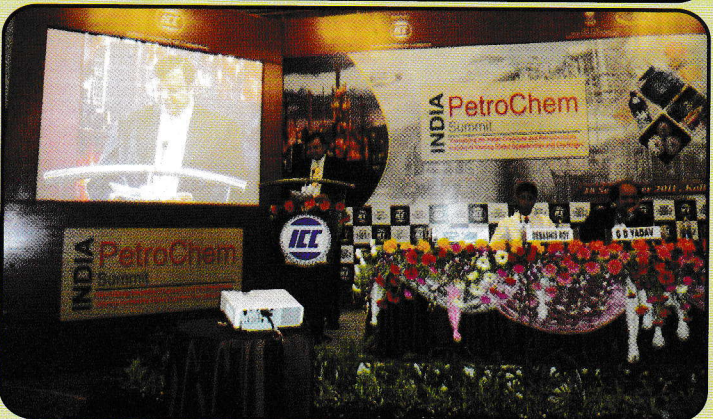
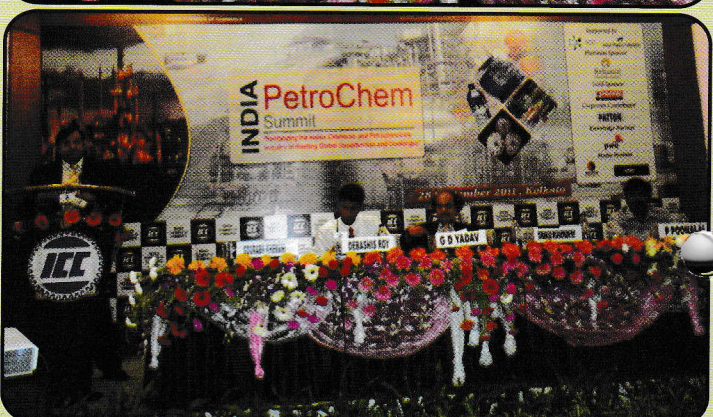
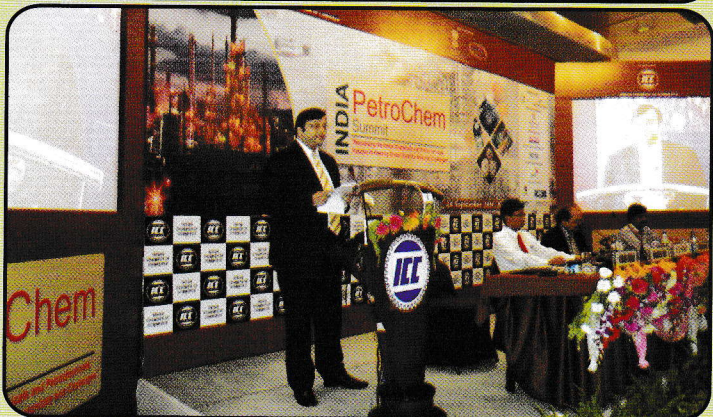
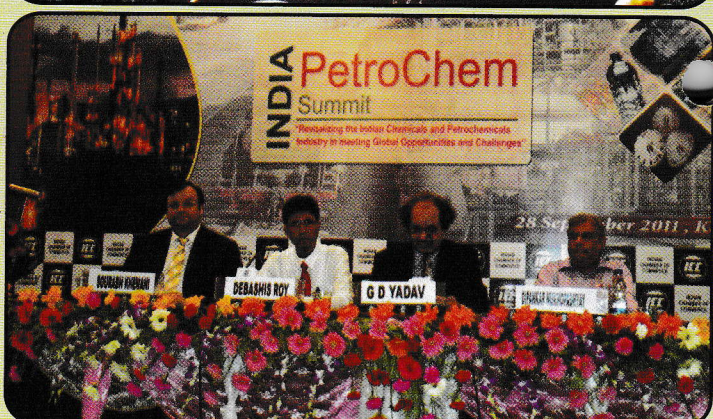
polymechplast

POLYMECHPLAST MACHINES LTD.

www. polymechplast.com

GLIMPSES

**INDIA PETROCHEM SUMMIT ORGANISED BY INDIAN CHAMBER OF COMMERCE
SUPPORTED BY INDIAN PLASTICS FEDERATION AT KOLKATA
ON 28TH SEPTEMBER, 2011**



The Biggest Business Opportunity in the world of Plastics



- **Over 1800 Exhibitors**
- **1,50,000 Business Visitors**

- **Spread Over 1,00,000 Sq. Mtrs.**
- **Participation From Over 40 Countries**

For online registration log on to www.plastindia.org

PLASTINDIA 2012 Infinite Opportunities

8th International Plastics Exhibition & Conference
Feb. 1 - 6, 2012, New Delhi

Supported by



MINISTRY OF CHEMICALS & FERTILIZERS
DEPT. OF CHEMICALS & PETROCHEMICALS
GOVERNMENT OF INDIA



Organised by

PLASTINDIA FOUNDATION®

ipf PLASTICS INDIA

AN OFFICIAL ORGAN OF INDIAN PLASTICS FEDERATION

IT PAYS TO ADVERTISE IN "PLASTICS INDIA"

The only Journal of its kind Published from Eastern India
for the growth and development of plastics Trade & Industry

MECHANICAL DATA

1. Overall size of Journal	:	28.5 cm x 22 cm
2. Front Cover (Print Area)	:	20.0 cm x 18 cm
3. Full Page (Print Area)	:	23.5 cm x 18 cm

ADVERTISEMENT TARIFF (PER INSERTION)

1. Front Cover (Colour)	:	Rs. 15,000/-
2. Back Cover (Colour)	:	Rs. 12,500/-
3. Inside Front Cover / Inside Back Cover (Colour)	:	Rs. 11,500/-
4. First Page / Last Page (Colour)	:	Rs. 10,000/-
5. Second Page / Second Last Page (Colour)	:	Rs. 8,000/-
6. Colour Full Page	:	Rs. 6,000/-
7. B/W Full Page	:	Rs. 3,000/-

Note : 15% discount will be allowed on 12 insertions and
10% discount on 6 insertions to **DIRECT ADVERTISERS**.

For Advertisement please contact :

ipf INDIAN PLASTICS FEDERATION

8B, Royd Street, 1st Floor, Kolkata - 700 016, India

Tel: +91 33 2217 5699 / 5700 / 6004, Fax : +91 33 2217 6005 • E-mail : ipf@cal2.vsnl.net.in

Log on to : www.theipf.in

Subscriber Form / Advertisement Form

Name.....

Company Name.....

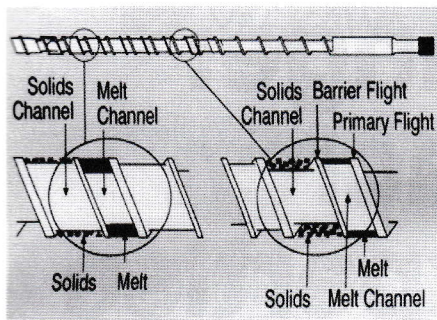
Address in full.....

Phone No..... Fax.....

E-mail : Website.....

I want to Subscribe/Place an Advertisement for PLASTICS INDIA MAGAZINE on & from.....
(Please send Pay Order/DD in favour of Indian Plastics Federation, payable at Kolkata)

Signature with Stamp



A better option for overcoming this challenge is the use of a barrier screw. The typical barrier screw is comprised of three sections similar to the conventional feed screw. However, with the barrier screw, the compression or transition section is replaced by a two channel barrier section. As the two channels begin, the wider and deeper solids channel leads the shallow, narrow melt channel. The two channels are separated by a "barrier" flight, whose diameter is smaller than the primary flight.

As the plastic pellets or "solids" move into the barrier section of the screw, they are blocked from passing into the "melt" channel by their size. As the pellets are compacted against the inner barrel surface by the rising solids channel, frictional heat energy is generated, applying a film of polymer melt on the barrel ID. The melted polymer passes over the barrier flight and is wiped off the barrel surface by the primary flight. Melted polymer collects in the deepening melt channel. The removal of the melted plastic from the solids channel allows for the continuous renewal of solids to the barrel surface, resulting in more efficient heat generation and transfer. This can also have the effect of maintaining the compaction of the solid bed longer. When solids are held together and in contact with the barrel surface, melting is most efficient. The plasticizing rates of barrier screws are 30% higher than with general purpose screws. The added costs of this solution are balanced out by shorter cycle times and improved melt quality.

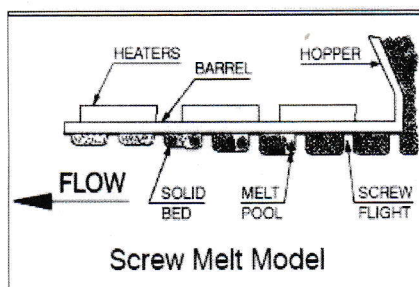
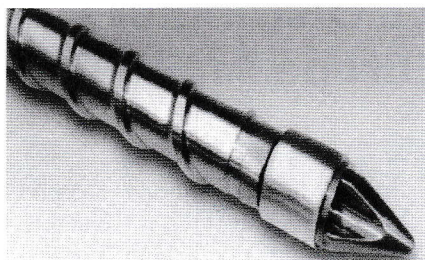
To ensure the optimal melt quality, FMI supplies special high-performance plasticizing units for PET processing.

Benefits

- Outstanding Plasticizing Performance
- Mild material preparation providing minimum AA content

- Excellent Melt Quality
- Energy efficient Plasticizing

FMI Standard Screw



Impressive in the melt preparation for numerous conventional applications, the standard screw has proved itself as a versatile and cost efficient solution. The standard screw really comes to the fore with a broad range of materials when implemented for technical and engineering material applications with medium and low rotational speeds. The balanced geometry ensures exceptional temperature management and homogeneity within a broad process latitude when processing materials such as PA, ABS, PC, PMMA or POM.

Benefits

- Exceptional temperature management and homogeneity for technical and engineering material applications
- Excellent reproducibility and process reliability within broad process latitude
- Universally deployable for a broad range of material with medium plasticizing requirements

Protection against Wear

Plasticizing components are subjected to exceptionally high stress loads. A variety of additives such as glass fiber, fillers and colorings call for targeted measures to avoid adhesive and abrasive wear. For adhesive and abrasive wear the recommended high strength materials include bi-metallic barrels and screws. FMI's range of products feature high quality materials that are coordinated to produce favorable friction conditions and thereby optimally protect the components against surface wear.

In addition to the appropriate choice of materials, through intelligent geometric design FMI focuses on ensuring that no unnecessary stress is exerted on the plasticizing components.

Protection against Corrosion

Above all, the rapid development of new technical plastics frequently calls for additional protection of the plasticizing components against corrosion. Solution oriented coatings largely prevent corrosion from oxidation and intercrystalline.

Protection against Wear	Protection against Corrosion	Screw	Barrel	Application area
1	1	Nitriding	Nitriding	Non-reinforced plastics, standard packaging application
4	3	Tool Steel*		Reinforced plastics with medium filling ratio
5	2	Powder Metal Tool Steel	Bi-metallic Alloys*	Reinforced plastics with high filling ratio
2	5	Stainless Steel		Reinforced plastics with low filling ratio

*Selection of Bi-metallic Barrel & Hardened screw is based on Application & Raw Material used. 1 to 5 indicates performance from Lowest to Highest. i.e. 1 – Lowest, 5 - Highest

Innovation

3B The Exclusive Distributor Of Webcore For Europe And Asia

3B-the fibreglass company and WebCore Technologies, LLC of Miamisburg, Ohio-USA announce a strategic collaboration appointing 3B as the exclusive distributor in Europe and Asia of TYCOR® W, WebCore's innovative fibre-reinforced core material solution for utility scale wind blades. The collaboration will be effective from October 1st, 2010 onwards.

TYCOR® is an innovative core material for composites which combines glass fibres with closed-cell, low density foam in an engineered architecture. The TYCOR® family of core products are used to produce lightweight, high strength sandwich structures in a wide range of markets from wind turbine blades to truck bodies, railcar decks, military shelters, bridge decks, cargo ship floors, temporary mats and runways.

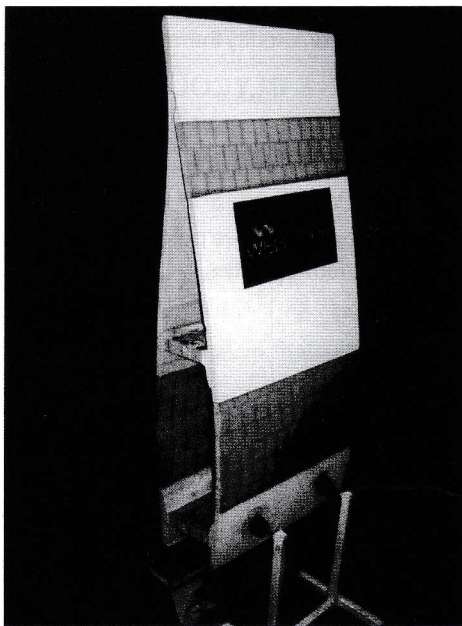
TYCOR® W is the product of choice for the wind energy market. It has been specifically engineered to provide wind turbine blade designers with a targeted selection of core designs to optimize structural performance, weight and cost. It is finding success in GL-approved (Germanischer Lloyd) wind turbine blades as it offers higher specific shear modulus compared with traditional core materials such as balsa wood and PVC foam.

TYCOR® W is ideally suited to both flat and curved geometries with the distinct advantage that it absorbs less resin than foam and balsa cores. TYCOR® W is offered in four standard core products to give blade

designers and manufacturers the flexibility to optimize blade designs. WebCore is also able to tailor its products to individual blade and turbine specifications.

Onur Tokgoz, Wind Energy Global Business Leader of 3B, stated; "3B is

increase our global presence. 3B shares WebCore's commitment to delivering quantifiable competitive advantage for our customers through innovative solutions. 3B is highly regarded in the wind energy industry, and their experienced international sales, marketing and technical support teams will accelerate our penetration in the critical markets in Europe and Asia."



About 3B-the fibreglass company

3B-the fibreglass company is a leading developer and supplier of fibreglass products and technologies for the reinforcement of thermoplastic and thermoset polymers. This dynamic and entrepreneurial company has two state-of-the-art fibreglass manufacturing facilities in Battice, Belgium and Birkeland, Norway as well as a dedicated R&D Centre located in the heart of Europe. 3B's ambition is to be the thermoplastic reinforcement global leader, the wind energy solution provider and the business development partner for innovative composite applications. This growth agenda builds upon three strategic drivers that are sustainability, technological innovation and a global presence to most effectively service our international customers.

committed to offer efficient and innovative solutions for the wind energy market. This distribution agreement with WebCore adds a new solution to our existing high quality product portfolio of Advantex® and HiPer-tex™ high performance glass fibres. Furthermore, WebCore produces TYCOR W using an environmentally clean manufacturing method that ensures consistent, reliable, physical and structural performance and processing. This approach is totally aligned with the sustainability vision of 3B."

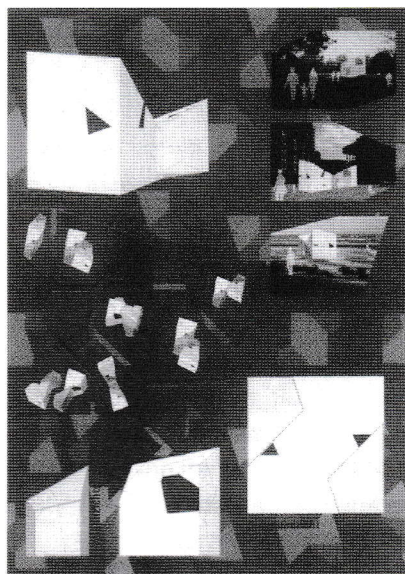
Doug Ventura, CEO of WebCore, added; "3B is the optimal partner for WebCore to

The company operates two unique eco-responsible and high performance glass technologies, Advantex® and HiPer-tex™. These two well established brands combine durability with eco-responsibility and versatility, making them the materials of choice for a wide range of industries. With a sound foundation of unique assets, 3B is committed to design reliable and durable fibreglass solutions available globally.

Material Update

Trespa Rewards Visions Of The Future - And The Role Of Architecture

As the leading producer of innovative and inspirational façade solutions, Trespa International B.V. marked its 50th anniversary with an international competition for Architects. With a long and distinguished history, Trespa Miteon panels are the material of choice for the creation of some of the world's most outstanding façades. However, rather than look back, Architects were invited to step 50 years into the future –



and design a façade, using state-of-the-art Trespa technology. Entries were received from all over the world, and the professional jury of Architects, Designers and Trespa representatives selected three winning entries (see below). In summing up, the Jury stressed that selecting the best projects out of all the entries had been very difficult: "The broad nature of the assignment led to a great variety in entries. The designs range from very conceptual and far distant in the future to designs that could almost be made today. Some are very concrete ideas and others are far away beacons of innovation.

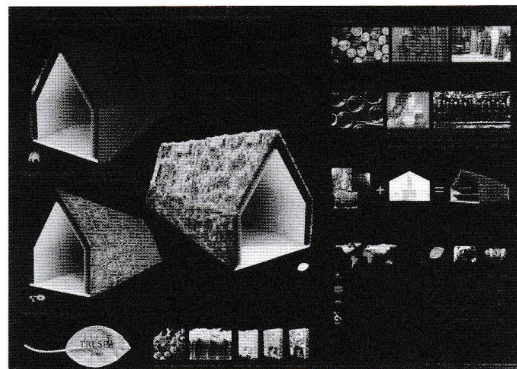
We saw many designs based on the vision that energy efficiency and energy generation will be incorporated in building envelopes. Other designs feature highly interactive or modifiable façade concepts even up to a point where modular façade elements can be used to support a nomadic way of life."

Trespa Miteon

Trespa Miteon is a decorative high-pressure compact laminate (HPL) with an integral surface manufactured using Trespa's unique in-house technology, Electron Beam Curing (EBC). Engineered for façades and other demanding exterior applications, Trespa Miteon's underlying technology transforms wood-based fibres with thermosetting resins under high pressure and at high temperatures into striking panels that meet the most exacting specifications. With a broad range of colours, finishes and tactile effects, Trespa Miteon brings compelling aesthetic and nearly limitless design possibilities to next-generation architectural claddings.

Trespa International

Trespa International B.V. is a leading innovator in the field of architectural materials, recognised internationally as the premier developer of HPL panels and related building systems. Founded in 1960 and with headquarters in the Netherlands, Trespa manufactures high-performance Trespa Miteon panels for the worldwide market. Trespa's focus is on product development, combining quality



manufacturing technologies with intelligent solutions for architectural applications.

Surface manufactured using Trespa's unique in-house technology, Electron Beam Curing (EBC). Engineered for façades and other demanding exterior applications, Trespa Miteon's underlying technology transforms wood-based fibres with thermosetting resins under high pressure and at high temperatures into striking panels that meet the most exacting specifications. With a broad range of colours, finishes and tactile effects, Trespa Miteon brings compelling aesthetic and nearly limitless design possibilities to next-generation architectural claddings.

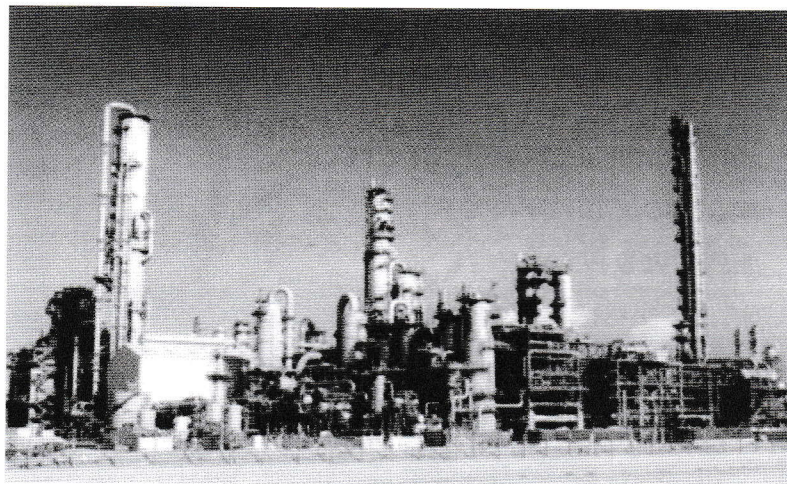
For more details:
www.trespa.com

Material News

SABIC Presents Growing Product Portfolio At The 2010 SEPAWA Congress

SABIC will present two new product groups from its Performance Chemicals Strategic Business Unit - Ethanolamines and Ethoxylates - at the 57th SEPAWA Congress & European Detergents Conference (EDC) to be held in Fulda, Germany, from October 13-15, 2010. This year SABIC will participate for the first time as an exhibitor at the annual congress, which is considered as one of the most significant meeting points for the industry. With a membership of more than 1,200 companies drawn from all sectors of the chemical industry, SEPAWA is one of the largest independent professional associations in Europe. SABIC sees the congress as an important opportunity to present itself as a strong partner to existing and future European and global customers. SABIC's Performance Chemicals Business operates three Business Units: Base Products, Functional Polymers and Functional Chemicals. Ethanolamines and Ethoxylates, produced at SABIC's Saudi Kayan plant in Jubail, Saudi Arabia, are part of the Functional Chemicals product range and are used, amongst others, in household detergents and personal care products.

"SABIC's Performance Chemicals Business aims to diversify the SABIC product portfolio and accelerate the exploration of new chemical and polymer value chains to meet our customers' needs", says Rusmir Niksic, SABIC General Manager, Functional Chemicals. "The European market is one of the key areas for SABIC's growth strategy in performance chemicals where the company aims to expand its networks in sales, marketing and distribution. SABIC intends to combine its knowledge of customer



desired applications and processes, product quality, technology platforms, customer service excellence and security of feedstock supply to create value, facilitate growth and spur innovation for its European customers".

"At SEPAWA, we will introduce our initial product portfolio including a range of fatty-alcohol ethoxylates and polyethyleneglycols. In the next few years we also plan to launch additional chemistries which include polysorbates, castor oil ethoxylates and other products required by our global customers which our Technology & Innovation group is working on. The ethanolamine range will include mono, di and tri grades", says Turki Al-Hamdan, SABIC Global Business Manager, Ethoxylates & Amines. "SABIC's established position in ethylene oxide and the recently-announced natural fatty-alcohol project will be leveraged to create value for our customers", added Al-Hamdan.

About SABIC

Saudi Basic Industries Corporation (SABIC) ranks among the world's top six petrochemical companies. The company is among the world's market leaders in

the production of polyethylene, polypropylene and other advanced thermoplastics, glycols, methanol and fertilizers.

SABIC recorded a net profit of SR 9 billion (US\$ 2.4 billion) in 2009. Sales revenues for 2009 totaled SR 103 billion (US\$ 27 billion). Total assets stood at SR 297 billion (US\$ 79.2 billion) at the end of 2009. SABIC's businesses are grouped into Chemicals, Polymers, Performance Chemicals, Fertilizers, Metals and Innovative Plastics. SABIC has significant research resources with six dedicated Technology & Innovation Centers in Saudi Arabia, Europe, the USA and India. The company operates in more than 40 countries across the world with 33,000 employees worldwide. The company has 19 world-scale complexes in Saudi Arabia. Elsewhere, SABIC manufactures on a global scale in the Americas, Europe and Asia Pacific.

Headquartered in Riyadh, SABIC was founded in 1976 when the Saudi Arabian Government decided to use the hydrocarbon gases associated with its oil production as the principal feedstock for production of chemicals, polymers and

News Round-up

fertilizers. The Saudi Arabian Government owns 70 percent of SABIC shares with the remaining 30 percent held by private investors in Saudi Arabia and other Gulf Cooperation Council countries.

About Performance Chemicals

Performance Chemicals is leading the diversification of the SABIC product portfolio toward value-adding functional chemicals and polymers. The Performance Chemicals Business is aligned into three business units – Base Products, Functional Chemicals and Functional Polymers – each of which has created a distinct marketing approach. Performance

Chemicals produces and markets technologically advanced products, such as ethanolamines, surfactants and other specialty products. Over the coming years, Performance Chemicals will introduce more than 40 new performance products and serve new customers in growing industries ranging from personal care, construction, automotive and alternative energy to aviation.

About SABIC in Europe

In Europe, SABIC has 13 world-scale production facilities which manufacture innovative plastics, polyethylenes, polypropylenes and chemical products. Throughout Europe, SABIC employs approximately 6000 people.

The main European offices for three of SABIC's strategic business units are located in The Netherlands - Innovative Plastics (Bergen op Zoom), Polymers (Sittard) and Chemicals (Sittard). They operate an extensive network of local sales offices and logistical hubs throughout Europe which are also responsible for the sales of products manufactured elsewhere in the world.

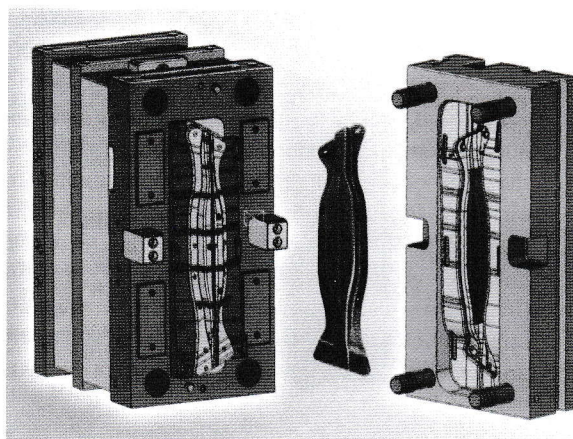
SABIC's European research facilities form part of the global Technology and Innovation organization and can be found in the Netherlands (Geleen and Bergen op Zoom) and Spain (Cartagena).

For more details:
www.sabic-europe.com

Georg Kaufmann Formenbau AG presents GK LIPfibre mould technology

Georg Kaufmann Formenbau AG, Busslingen/Switzerland, made the public début of its newly developed moulding technology GK LIPfibre (Georg Kaufmann Lightweight Integrated Process fibre). This moulding system, which consists of a combined thermoforming and injection mould, produces lightweight structural components from glassfibre reinforced thermoplastic composites. Such parts are distinguished by their high strength and rigidity and are 25% lighter than comparable metal components. Enormous interest was shown in this innovative moulding and processing technology, especially by

visitors from the automotive and aviation industries, but also for other applications



throughout the plastic industry.

Demonstrated at K 2010 was the scrap-

free production of a passenger car side impact protection component on an injection moulding machine from KraussMaffei. The entire project was realized in close collaboration with Audi AG, KraussMaffei Technologies GmbH, Lanxess Deutschland GmbH, Bond-Laminates GmbH, and Jacob Composite GmbH. For the production of this dynamic impact modifier, a flat pre-heated sheet of fabric and glassfibre reinforced thermoplastic is first thermoformed and remains in the now closed mould. Then in a second step, in the same mould, it is enhanced by adding reinforcement ribs, corners, and edges. The material for the ribs is a glassfibre

News Round-Up

filled polymer.

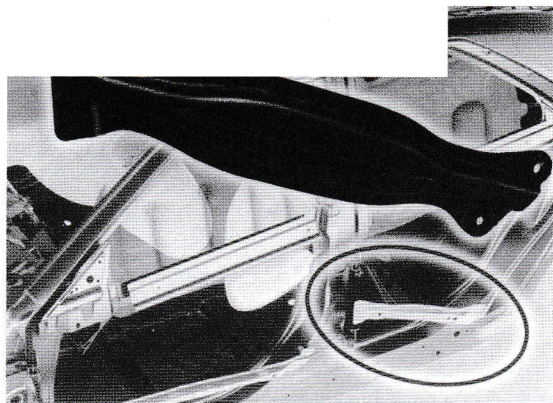
This innovative combination of thermoforming and injection moulding requires a production system in which the individual process steps are exactly coordinated and synchronized with each other, in order to guarantee the required product quality and process reliability.

The first stage of the process – the thermoforming of the glassfibre-reinforced thermoplastic composite sheet – begins with a special cavity insert that presses the sheet onto the core and holds it in place. During the thermoforming the sheet may not develop any creases. Also important is the orientation of the fibres in the now formed sheet, which is predetermined according to the functionality of the part.

The mould remains in its closed position at the end of the thermoforming process. The melt for the overmolded ribs,

consisting of a glass fibre reinforced polymer, is injected via a hot runner system and bonds completely with the thermoformed sheet. In addition the melt flow ensures that all sections of the part are fully formed and filled.

The research production mould was equipped with several sensors for pressure and temperature measurements. They monitored the various process stages, the shaping of the glassfibre reinforced sheet during thermoforming, the injection of the polymer melt, and the complete filling of all corners and edges of the part. The recording of the measurements during these operations will help to better understand the requirements for future



applications. Future moulds of this type will be equipped likewise with considerably fewer sensors to monitor the different steps in the process. Detailed production documentations for safety relevant parts are then available.

For more details:
www.gktool.ch

Milliken Increase PP processability And Properties In Thermoforming And Injection Moulding

Milliken's Hyperform® HPN nucleating agents provide major improvements in performance and processability of polypropylene (PP) grades intended for thermoforming as well as injection moulding. They provide the action to match the words of the company's theme for K 2010 – "Increasing sustainability through additive innovation."

Hyperform HPN additives provide isotropic shrinkage in formed parts. As a result, they can fix critical

problems faced by processors involved



in housewares, materials handling, high-speed moulding of thin-walled packaging and also technical components. "If you have a problem with shrinkage and

warpage, productivity, aesthetics, or stiffness/impact balance, there is a good chance that we can go a long way to solving it with Hyperform HPN," says Sami T.K. Palanisami, Market Manager Plastic Additives EMEA.

Typical applications range from increasing processability and optics in packaging grades, through cycle time reduction and warpage elimination in production of pallets and crates, to fine-tuning CLTE

(coefficient of linear thermal expansion) and shrinkage in grades for automobile bumpers and instrument panels. Palanisami cites Hyperform HPN-600ei, intended for incorporation into clear thermoformable sheet extrusion grades of polypropylene that can be deep-drawn into cups typically used in bars for serving cold drinks. HPN-600ei nucleated polypropylene presents a cost effective alternative to PET and polystyrene (PS). Cups are highly transparent and have an excellent visual appearance, rather than the yellowish appearance that results from the use of some other conventional nucleating agents. Meat trays and yoghurt cups are other important applications, especially in Europe.

The nucleating agent increases the achievable output rates on thermoforming equipment to levels normally only achievable with other plastics, says Palanisami. The PP parts

use less material, gaining further cost savings.

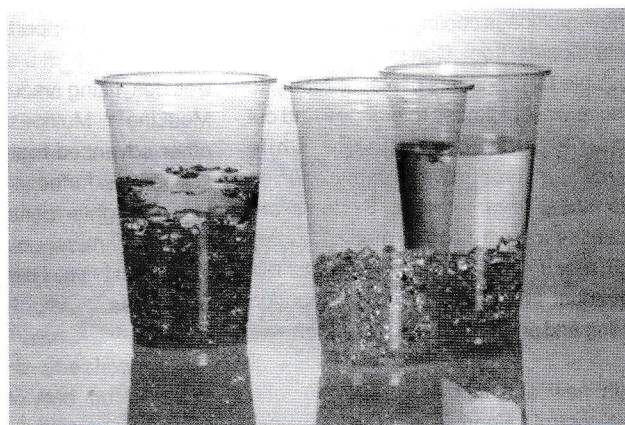
A second Hyperform HPN grade, HPN-20E, is intended for a wide range of injection moulding applications, from thin walled packaging containers to large automotive parts. Unlike other nucleating agents that improve the stiffness of PP at the cost of reduced impact properties, HPN-20E has no negative effect on toughness.

This additive is effective at much lower loadings than alternatives such as sodium benzoate and talc to provide very good dimensional stability and hence low or zero warpage in mouldings. HPN-20E

also disperses very well in the high melt flow grades of PP favored for many thin wall injection moulding applications. The reduction in thermal expansion (CLTE) that it induces allows the production of "zero gap" automotive bumper fascias.

Hyperform HPN-20E complements another Milliken nucleating agent, HPN-68L, which can

provide even higher polymer crystallization temperature and therefore lead to improved productivity. In addition, HPN-68L enables pigment 'levelling',

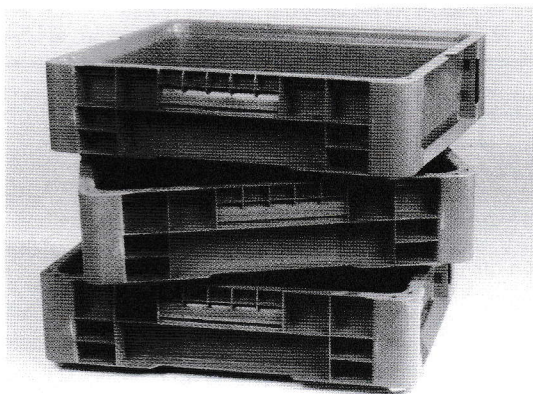


which means that parts such as packaging caps can have the same shrinkage behaviour, whatever colour they are produced in, because the nucleating agent overrides any nucleating effect of the pigment. This is useful for processors making one part in several different colours, since they do not have to adjust their machine processing settings each time they change colour.

About Milliken & Company

A leading international corporation, Milliken is a privately-held, technology-based company serving textile, chemical, and floor covering markets, and is dedicated to building a strong culture of integrity, innovation, and excellence. Milliken Chemical, a division of Milliken & Company, specializes in developing and producing additives and colourants for the global plastics and household care industries. Milliken Chemical has application and development centres around the world dedicated to customer support.

For more details:
www.millikenchemical.com
www.clearpp.com



can be made with the same wall thickness as other materials. So because the material is less dense, processors

PRESS CLIPPINGS

Ekdin – 21.09.2011

প্লাস্টিক প্রযুক্তি বাড়াচ্ছে আইপিএফ

নিজস্ব প্রতিবেদন: প্লাস্টিক ব্যবহার নিয়ে সরকারের সিদ্ধান্তকেই কার্যত চ্যালেঞ্জ করে বসল ইন্ডিয়ান প্লাস্টিক ফেডারেশন। দূষণ ঠেকাতে রাজ্য সরকার ৪০ মাইক্রনের নীচে প্লাস্টিকের ব্যবহার নিষিদ্ধ করার সিদ্ধান্ত নিয়েছে। কিন্তু ফেডারেশনের দাবি, নিষিদ্ধ নয়, ওই ঘনত্বের প্লাস্টিক ব্যাগ ব্যবহারের পরে ফেলে না-দিয়ে তা পুনর্ব্যবহারযোগ্য করা উচিত। সেক্ষেত্রে দূষণ সমস্যার সমাধান হবে এই শিল্পের সঙ্গে জড়িত সকলেরই। মঙ্গলবার সকালে ইন্ডিয়ান চেম্বার অফ কমার্সে আয়োজিত এক অনুষ্ঠানে এমন কথাই উঠে আসে ফেডারেশনের কতৃদেব বক্তব্যে।

ইন্ডিয়ান প্লাস্টিক ফেডারেশন এবং প্লাস্ট ইন্ডিয়া ফাউন্ডেশনের যৌথ উদ্যোগে আগামী বছর ৫ থেকে ৮ অক্টোবর পর্যন্ত সায়েন্স সিটি অডিটোরিয়ামে অনুষ্ঠিত হবে 'ইন্ডপ্লাস-১২' নামে প্লাস্টিকের একটি প্রদর্শনী। সেখানে দেশ বিদেশের বহু নামী বহুজাতিক সংস্থা অংশগ্রহণ করবে। প্লাস্টিক এবং পলিমার প্রযুক্তিকে আরও বেশি করে ভারতের বাজারে ছড়িয়ে দেওয়ার উদ্যোগ নিয়েছে আইপিএফ এবং প্লাস্ট ইন্ডিয়া ফাউন্ডেশন। ফাউন্ডেশনের সহসভাপতি

বিপিন শাহ বলেন, 'আমরা রাজ্যের পরিবেশ মন্ত্রকের সিদ্ধান্তের বিরোধিতা করছি না। কিন্তু প্লাস্টিকের কাপ বা গ্লাস ব্যবহার বন্ধ করে দিলে তার একটা সঠিক বিকল্পও তো দরকার। ৪০ মাইক্রনের চেয়ে মোটা প্লাস্টিক তৈরি করতে গেলে কিছু অতিরিক্ত কাঁচামাল ব্যবহার করতে হবে প্রস্তুতকারকদের। সেটা একটু বেশিই খরচসাপেক্ষ।' তিনি আরও জানিয়েছেন যে, 'প্লাস্টিক ইন্ডাস্ট্রি বর্তমানে প্রায় ৮০ শতাংশ প্লাস্টিক পুনর্ব্যবহারযোগ্য করে তোলার কাজ করছে। অথচ

জুন মাসে। আশা করছি সেখান থেকে কিছু ভালো ম্যানেজার পাওয়া যাবে।' তিনি জানিয়েছেন, 'শেষ ১৫ বছরে আমরা এমনিতেই উৎপাদন ক্ষমতা অনেকটাই হারিয়েছি। চীন এবং আমেরিকা আমাদের থেকে অনেকটাই এগিয়ে। সুতরাং এই মুহূর্তে আমাদের উন্নতিকরণ বিশেষ ভাবে দরকার।'

পলিমার ইন্ডাস্ট্রি থেকে উপকৃত হবে বেকাররাও। এমনটাই দাবি সংস্থার। আইপিএফ-এর সভাপতি সৌরভ খেমনির বক্তব্য অনুযায়ী, 'আমরা

সরকারি সিদ্ধান্তকে বুড়ো আঙুল

প্রযুক্তিটাকে বাজারে আনব। তবে সেটাকে কাজে লাগানোর দায়িত্ব তো কাউকে নিতে হবে।' তাঁর দাবি, 'এই ইন্ডাস্ট্রিতে প্রতি বছর ১৫ শতাংশ করে ব্যবসার বৃদ্ধি ঘটতে পারে এবং আগামী দিনে তা আরও বাড়বে।'

আইপিএফ এবং প্লাস্ট ইন্ডিয়া ফাউন্ডেশন-এর এই উদ্যোগে সামিল হয়েছে যে সব সংস্থা, তার মধ্যে উল্লেখযোগ্য হল, এক্সাইড, এক্সপ্রো, কুশল গ্রুপ, প্রতাপ গ্রুপ প্রভৃতি। সংস্থাদ্বয়ের আশা, আগামী প্রদর্শনীতে প্রায় ৭০০-র কাছাকাছি কোম্পানি অংশগ্রহণ করবে।

Bartaman – 21.09.2011

The Times of India –
21.09.2011

সাঁকরাইলে হবে 'নলেজ সেন্টার'

নিজস্ব প্রতিনিধি, কলকাতা: হাওড়ার সাঁকরাইলে প্রস্তাবিত পলি পার্কে গড়ে তোলা হবে 'নলেজ সেন্টার'। এই সেন্টার গড়ে তোলার জন্য তহবিল গঠন করতে আন্তর্জাতিক প্রাস্টিক প্রদর্শনীর আয়োজন করতে চলেছে ইন্ডিয়ান প্রাস্টিকস ফেডারেশন। সোমবার এ সংগঠনের পক্ষে এ খবর জানানো হয়েছে। 'ইন্ডপ্লাস-১২' নামে এই প্রদর্শনী আগামী বছর অক্টোবর মাসে অনুষ্ঠিত হবে কলকাতাতেই।

Indplas in city: Indian Plastics Federation will host Indplas next year in the city. It will see participation of around 50 foreign countries.

Jansatta – 20.09.2011

Dainik Jagaran – 20.09.2011

इंडियन चेंबर ऑफ कामर्स में प्लास्टिक के बारे में अंतरराष्ट्रीय प्रदर्शनी, 4, इंडिया एक्सचेंज प्लेस में सुबह 11.30 बजे से।

छठे अंतरराष्ट्रीय प्लास्टिक प्रदर्शनी का आगाज, स्थान : 4 इंडिया एक्सचेंज प्लेस, समय : 11.30 बजे से

Dainak Jagaran – 21.09.2011

प्लास्टिक रिसाइक्लिंग पर जोर



कार्यक्रम में बोलते आइसीसी के उपाध्यक्ष

जागरण

कोलकाता, जागरण संवाददाता : इंडियन प्लास्टिक फेडरेशन के उपाध्यक्ष विपिन एम शाह ने कहा कि मौजूदा दौर में प्लास्टिक लोगों की अहम जरूरत बन गई है। प्लास्टिक के व्यवहार पर प्रतिबंध

लगाकर प्रदूषण को नियंत्रित करना संभव नहीं है, इसलिए जरूरी है कि हम इसका सही तरीके से व्यवहार करें और उसकी रिसाइक्लिंग कर फिर से उपयोग में लाएं। उन्होंने उम्मीद जताई कि जिस तरह से

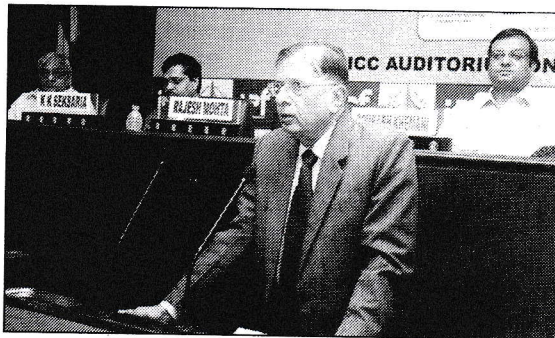
राज्य की कई नगरपालिकाओं में प्लास्टिक को गलाकर सड़क बनाने का काम चल रहा है, उसी प्रकार कोलकाता नगर निगम को भी प्लास्टिक की रिसाइक्लिंग कर उपयोग में लाना चाहिए। शाह इंडियन प्लास्टिक फेडरेशन व प्लास्टिइंडिया द्वारा संयुक्त रूप से आयोजित वार्ता सत्र में बोल रहे थे। फेडरेशन के सौरभ खेमानी ने बताया कि पूर्वी भारत में प्लास्टिक उद्योग का भविष्य उज्ज्वल है क्योंकि इस क्षेत्र में विकास का काम काफी तेजी से हो रहा है जिससे यहां प्लास्टिक उत्पादों की खपत बढ़ने की उम्मीद है। निर्माण कार्य में भी प्लास्टिक की बड़ी भूमिका है। वार्ता सत्र में महानगर में होने वाले छठी अंतर्राष्ट्रीय प्लास्टिक प्रदर्शनी 'इंडोप्लास 2012' की भी जानकारी दी गई। साइंस सिटी में होने वाली यह प्रदर्शनी 5 से 8 अक्टूबर तक चलेगी। जहां प्लास्टिक उत्पाद बनाने वाली विभिन्न कंपनियां अपने उत्पादों को पेश करेंगी और बिक्री से जो भी मुनाफा होगा उसे संकराइल में बनने वाले आईपीएफ नालेज सेंटर पर खर्च किया जाएगा। इस अवसर पर हल्दिया पेट्रोकेमिकल के उपाध्यक्ष रबीन मुखोपाध्याय व अमर सेठ भी उपस्थित थे।

Prabhat Khabar – 21.09.2011

सांकराइल में बनेगा आइपीएफ नॉलेज सेंटर

संवाददाता * कोलकाता

देश में जिस तरह से प्लास्टिक उद्योग का विकास हो रहा है, उसके लिए प्रशिक्षित व दक्ष श्रमिकों की आवश्यकता है। इस मांग को देखते हुए इंडियन प्लास्टिक्स फेडरेशन (आइपीएफ) की ओर से हावड़ा जिले के सांकराइल में आइपीएफ नॉलेज सेंटर की स्थापना की जायेगी। यह जानकारी मंगलवार को आइपीएफ के अध्यक्ष सौरभ खेमानी ने इंडोप्लास 12 के औपचारिक लांचिंग कार्यक्रम में दी। उल्लेखनीय है कि आइपीएफ व प्लास्टि इंडिया फाउंडेशन की ओर से पांच से आठ अक्टूबर 2012 तक साइंस सिटी में इंडोप्लास 12 का आयोजन किया जायेगा। इसमें भारत के साथ-साथ अन्य देशों के प्लास्टिक उद्योग से जुड़ी कंपनियां भी हिस्सा लेंगी। उन्होंने बताया कि पश्चिम बंगाल औद्योगिक विकास निगम की ओर से हावड़ा के सांकराइल में बन रहे पॉली पार्क के पास ही नॉलेज सेंटर के लिए 1.02 एकड़ जमीन दी गयी है, जिस पर करीब 25 करोड़ रुपये खर्च किये जायेंगे।



85 हजार करोड़ का हुआ प्लास्टिक कारोबार

देश में प्लास्टिक के बने उत्पादों की मांग दिनों-दिन बढ़ती है। प्रत्येक वर्ष इसके कारोबार में करीब 16 फीसदी की वृद्धि हो रही है। यह जानकारी प्लास्टिइंडिया फाउंडेशन के उपाध्यक्ष विपिन शाह ने दी। उन्होंने बताया कि वर्तमान समय में देश में करीब आठ मिलियन टन प्लास्टिक उत्पादों का उत्पादन हो रहा है, जिनकी कीमत करीब 85 हजार करोड़ रुपये है। उन्होंने कहा कि भारत में प्लास्टिक उत्पादों का उत्पादन मांग की अपेक्षा काफी कम है। उन्होंने बताया कि प्लास्टिक उद्योग के विकास के लिए प्लास्टिकों की रिसाइक्लिंग पर विशेष जोर देना होगा। इस मौके पर हल्दिया पेट्रोकेमिकल्स लिमिटेड के उपाध्यक्ष रबीन मुखोपाध्याय, इंडोप्लास 12 एग्जिबिशन ऑर्गेनाइजिंग कमेटी के चेयरमैन अमर सेठ सहित अन्य गणमान्य लोग उपस्थित रहे।

The Bengal Post – 21.09.2011 State likely to have a second poly park

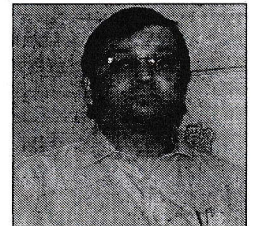
Our Correspondent

Kolkata: West Bengal may soon get a second poly park with the Indian Plastics Federation seeking permission from the state government on this.

"In Poly Park I, there are only 38 operational units and around 200 more applications are lying with us. For this we need a second poly park. Around 200-250 acres will be required and we are seeking permission from the state government. This should ideally come up either in Hooghly or Howrah," Sourabh Khemani, president, Indian Plastics Federation, said on the sidelines of announcing Indplas'12, the sixth international exhibition on plastics, to be held from October 5-8, 2012.

The project will be undertaken in the public-private partnership (PPP) mode and would require an investment of ₹1,200-1,400 crore. A turnover of nearly ₹3,500 crore is likely to be generated from it.

"The project would be a



■ Sourabh Khemani – BP

vate developers and a government organisation. We are having discussion with WBIDC, WBIIDC and WBSIDC and any one of them will be a part of the JV. IPF will act as a facilitator," he said.

A subsidy of ₹40 crore from the Centre may come for the cluster development scheme. Per capita processing capacity of eastern India is 1.5 kg as against per capita consumption of 3.5 kg.

A ₹25-crore knowledge centre is also going to come up at Sankrail in Howrah district, adjacent to the Poly Park I, by March 2013.

IPF is also planning to create a "plastic" building that will be light in structure.

MONTHLY CIRCULAR OF THE FEDERATION

CIRCULAR NO. 50/2011 :

Sub: Membership of the Federation

The Federation has received the following applications for membership of the Federation :

1. a) Name & Address of the Applicant Firm : **M/S. K.K. ORGANOSYS & POLYMERS PVT. LTD.**
181, Mahatma Gandhi Road
Kolkata - 700 007
- b) Class of membership : **Manufacturer Member**
- c) Proposed by : M/s Plastic Engineers
- d) Seconded by : M/s Engineers Udyog
- e) Name of representatives : 1) Mr. Kamal Kumar Dugar
2) Mr. Tapas Kumar Chatterjee
- f) Items of manufacture : Manufacturer of PVC Film, Tube, Sheed, PVC, Component, Blister, Hand Twist & Auto Twist, Toffy Wrappers and Adhesive etc.
2. a) Name & Address of the Applicant Firm : **M/S. KUMAR ENGINEERS**
48A, Mukhtaram Babu Street
Kolkata - 700 007
- b) Class of membership : **Manufacturer Member**
- c) Proposed by : M/s Kwaliti Engineering Works
- d) Seconded by : M/s Kumar Engineering Works
- e) Name of representatives : 1) D. K. Nayyar
2) R. K. Nayyar
- f) Items of manufacture : Manufacturer of Plastic Moulding Machines & Moulds.

(Circulated in terms of Article 15 of the Articles of Association of the Federation)

CIRCULAR NO. 51/2011 :

Sub: Consumer Price Index Number for Industrial Workers for Kolkata for the months of January 2011 to July 2011

M o n t h	Consumer Price Index	
	Base (1982 = 100)	Base (1960 = 100)
January, 2011	922	4370
February, 2011	911	4318
March, 2011	911	4318
April, 2011	922	4370
May, 2011	927	4394
June, 2011	937	4441
July, 2011	952	4512



MALSON™

MALSONS POLYMERS PVT. LTD. **MFRS. OF : MASTERBATCHES AND COMPOUNDS.**

56E, Hemanta Basu Sarani, 4, B. B. D. Bag (East), Stephen House
4th Floor, Suite No. 57 ABC, Kolkata - 700 001 (West Bengal), India
Ph. No. +91-33-22623124 / 3125, 22429745, +91 98303 36400, Fax No. +91-33-22433091
E-mail : malson@karanpolymers.com, Website : www.karanpolymers.com



MALSON MASTERBATCHES, YOUR ROAD TO HIGH PROFIT AND QUALITY

PRODUCT RANGES

- Calcium/Talc filled PP Compounds
- Calcium / Talc filled PE Compounds
- Black, White and Colour Masterbatches
- UV, Optical Brightner, Anti-block, Masterbatches.
- Consumers specific Masterbatches.

USER INDUSTRIES

- Woven Sacks
- Films/ Tarpaulins
- Containers
- Non Woven Fabrics
- Carry Bags
- Moulded Goods
- PP/PE Pipes

DEMAND MACHINERY



Flow
Controller



Mould
Racks



Mould
Clamps



GREEN URJA Technologies

KOLKATA OFFICE :- (Sales & After Sales Services)

Plot No. 81 / 2 / 7 PHEARS LANE, Ground Floor -G 4,
KOLKATA-700012

Contact :- +919830009470 / +919748773025 / +919007532556

E-mail: ssptkolkata@gmail.com

Chennai Office:

SRI SAI PLASTO TECH

Regus, Olympia Technology Park Level-2

Altius Block, Level-11, No-1, Sidco Industrial Estate

Guindy, Chennai-600032, India

E-mail: sspt_plastics@live.in

website: www.srisaiplastotech.com