



Russia and India host the first two major plastics shows of the year. **Lou Reade** picks out some highlights from both events

Eastern promise

Two of the largest emerging economies – India and Russia – both host plastics exhibitions in early 2012.

The annual Russian plastics show, Interplastica, is held in Moscow on January 24-27. Just a few days later, in New Delhi, PlastIndia will open its doors. (The show runs from 1-6 February.)

Interplastica is owned and organised by Messe Dueseldorf, while PlastIndia is put together by the PlastIndia Foundation. Both Russia and India are seeing huge growth, especially in areas such as flexible packaging, so there is plenty of interest to film and sheet extruders.

Just one word of warning: if you are thinking of attending both shows, you'll need to pack two sets of radically different clothing: the average January temperature in Moscow is -8°C, while the corresponding temperature in New Delhi is around 20°C.

Although the two shows are held just days apart, many exhibitors will be seen at both events. Just one example of this is **Andritz Biax**, which was formerly the DMT Group. It offers production lines and turnkey plants for all types of biaxially oriented film. Its machinery spans the entire production process – from raw material preparation up to the winder.

Recently, it says that it started up the world's largest

Mechanical Simultaneous Stretching System (Mesim). The line was delivered to one of the world's leading manufacturers of speciality film for food and drinks packaging, protective packaging, and products for medical use.

The line has an installed film width of 2,100-3,200mm and production speed of up to 150m/min, which Andritz claims is the largest and fastest of its kind worldwide. Mesim is a special stretching technology patented by Andritz Biax. Stretching in both longitudinal and transverse direction takes place simultaneously in a single step, adjusting the stretching ratio over a wide range. This, says the company, produces film with high optical, chemical, and physical properties, for demanding applications such as special food packaging or high-resolution displays used in laptops and smartphones.

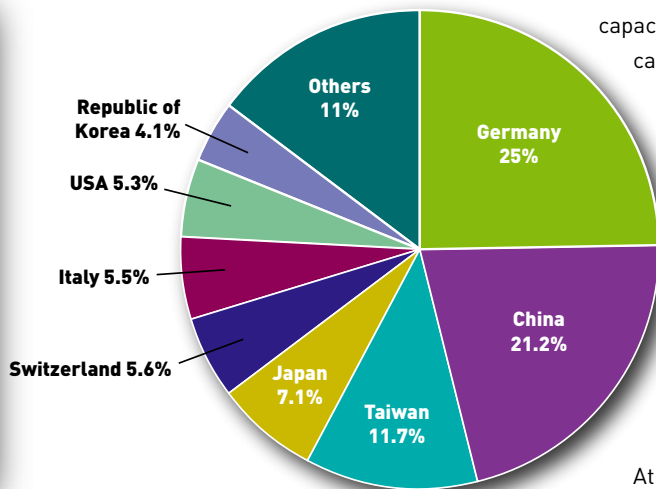
In November 2011, it signed a contract to supply a five-layer biaxially oriented PP film line to Dealim Industrial, a South Korean construction and chemicals company.

Brueckner Maschinenbau will be showcasing its bi-orientation capabilities, and other technologies, in both India and Russia.

Simona will showcase a number of products at Interplastica and PlastIndia, including sheet

WORLD EXPORTS OF PLASTICS AND RUBBER MACHINERY TO INDIA, 2010 (TOTAL €565M)

Source: VDMA



For efficient production of thin, flexible BOPET packaging film, it has a wide range of lines. Its multi-gap MD stretching, with stretch ratios up to 1:4.65, delivers film properties such as high MD tensile strength and E-modulus. Reduced pinning speeds and advanced direct drive technologies lead to superior film surfaces and optical qualities, it says. The twin screw extrusion system eliminates expensive resin preparation steps and reduces energy consumption.

At the same time, it boasts BOPP lines with working widths up to 10.4m and outputs above 6,000kg/hr. The lines are appropriate for all film types from plain to multi-layer, high clarity to opaque, barrier, shrink or metallisable for various applications.

It also offers line concepts for efficient production of high quality capacitor films. Technical highlights include: proven extrusion and filter system for high melt quality; special TDO heating system for defined air environment inside the stretching oven, to ensure optimum film purity; and Brückner's patented TCE film profile control for ultimate thickness profile.

The company will also showcase its cast PP (CPP) lines, with net film widths of 6.2m and a nameplate

Brueckner's expertise includes extrusion lines for BOPET, BOPP, CPP and BOPA

capacity of 16,000 tonnes/year, and BOPA film capacity.

Simona will highlight a number of materials for a host of industrial applications, with particular emphasis on PP, PVC-C, PVDF and E-CTFE. Different types of backings such as polyester (SK), polypropylene (PK) and glass-fiber (GK) will also be shown, at both Interplastica and PlastIndia. Products on show include sheets, rods, welding rods, pipes and fittings.

Bubble control at PlastIndia

At PlastIndia, Texas-based **DR Joseph** will be exhibiting its latest internal bubble cooling (IBC) technology alongside **Kundig Control Systems**.

DRJ will display its Dual Mode IBC and Non-IBC Width Control System. This latest development adds the ability to control film width when the die is run in non-IBC mode. This allows users to have two distinct control systems built into one package, which reduces cost compared to purchasing an IBC system and a non-IBC width control system separately.

In non-IBC mode, the system becomes its LF-Sizer system with the touch of a button, which uses the necessary parts from the IBC system and a pneumatic generator to handle bubble size management functions (fast fill, deflate and slow fill).

Customers with multi-layer dies have some products that do not allow for internal bubble cooling. In some cases, they can temporarily swap in a non-IBC die to run a specific set of jobs.

Previously, this required running without a width control system or buying a separate width control for non-IBC. Now, with DRJ's dual-mode system, the customer simply presses a button and the system converts instantly between IBC and non-IBC. Operators have only one interface to learn and use regardless of



Material advantage

Borealis will use Interplastica to showcase BorShape, the high performance film material that it introduced to the Russian market last year.

The family of high alpha olefin (HAO) terpolymers, based on Borstar bimodal polymerisation technology, has since been taken up by a number of processors. BorShape helps film producers to develop innovative packaging films with less material, says Borealis, while providing greater efficiency and improved environmental and lifecycle performance.

High toughness and very high stiffness allow faster film extrusion line speeds, downgauging of up to 30% and lower energy use during processing and transportation. Films made from BorShape have features that match or outperform those of comparable advanced metallocene catalysed polyethylene (mPE) materials, says the company.

the mode they are running.

Meanwhile, Kundig Control Systems of Switzerland also develops measuring instruments and control units for blown film extrusion. It will show its KNC-400 Clingfree thickness measuring system, which is based on a capacitance measuring principle.

An air cushion is produced between the thickness sensor and the film. This gap is constantly measured and controlled in order to guarantee a precise thickness measurement. Using an air-gap between the film and the measuring head ensures the production of films without scratches. The application is ideal for sensitive or sticky films. The measuring characteristics are equal to the K-300.

Also at PlastIndia, **Dynisco** will showcase its Guardian series of pressure sensors. These feature an internal relay switch that brings them into compliance with important machine safety standards. The devices are aimed at extruder manufacturers and users who need to comply with the European

Machinery Directive standard EN ISO 13849-1, or who want a higher level of safety in their equipment.

The internal relay switch

responds to input from the pressure sensor bridge, detecting an open bridge, a loss of power to the pressure sensor or user-selected pressure levels. When a fault is detected the relay contacts open, sending a signal to return the extruder to a safe operating condition. The sensors serve as a safety backup, bringing the extruder into compliance without the expense and complication of redundant sensors and external relay modules.

“A pressure sensor, used in a safety function on an extruder, is one of the machine components that will be expected to comply with the latest European safety directive starting in 2012,” said Bruce Temple, Dynisco compliance officer. “Compliance soon will be required for new extruders put into service in the European Community and existing equipment being retrofitted by the manufacturer.”

The sensors are self-certified based on the evaluation reports of third-party consulting, testing and assessment agency Exida. They have undergone extensive Failure Mode Effects and Diagnostic Analysis (FMEDA). Each sensor will meet Performance Level ‘c’ (PL‘c’) as defined in the newest Machinery Directive, the performance level sufficient for extruders.

Reifenhäuser has seen increased recent business in India, thanks mainly to a growing demand for film products there.

“Barrier lines and high-performance machinery are in great demand for blown film production,” said the company.

Reifenhäuser Kiefel Extrusion was able to win a contract from Mother Dairy, which makes Amul dairy products, as well as from the two Indian market leaders in the production of barrier films. Cast films are also increasingly in demand in India with a trend to lines for the production of polypropylene film, for example as laminated or metallised films or for food packaging.

German exports boom

VDMA will be at both Interplastica and PlastIndia, ramming home the point that both host countries still favour German plastics machinery. In fact, Russia and

Andritz is a leader in biaxial film technology



India are the third and fourth most important destinations for German machinery (after China and the US).

Exports to Russia during the first nine months of 2011 reached €143m, an increase of more than 85% compared to the previous year. This gives Germany just over a 30% share of the market, ahead of Italy and China (both around 13%) and Austria (5%).

It is a similar story for India. German exports to September 2011 rose almost 45% compared with the previous period. German machines account for 25% of the market in India, followed by China (21%), Taiwan (12%) and Japan (7%). Other leading suppliers, each with a share of around 5%, are Switzerland, Italy, the US and South Korea.

The German pavilion at Interplastica hosts 127 exhibitors, while that at PlastIndia hosts 94.



Click on the links for more information:

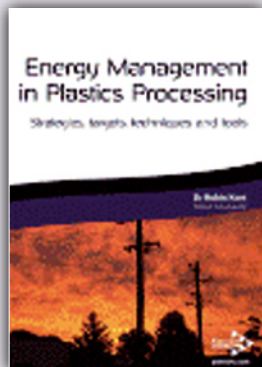
- ! www.plastindia.org
- ! www.interplastica.de
- ! www.andritz.com/biax
- ! www.brueckner.com
- ! www.simona.de

- ! www.drjosephinc.com
- ! www.kundig-hch.com
- ! www.dynisco.com
- ! www.reifenhauser.com
- ! www.borealisgroup.com
- ! www.vdma.org

Dynisco's Guardian series of pressure sensors are aimed at extruder manufacturers and users who want a higher level of safety in their equipment

Save money and energy with these best-selling books from Plastics Industry Expert Robin Kent

Energy Management in Plastics Processing: Strategies, targets, techniques and tools



Learn how to cut up to 30% from your energy bill – permanently, by understanding where energy is wasted and applying a structured approach to energy management.

- evaluate your current strengths and weaknesses in energy management
- benchmark consumption against real industry data
- carry out effective site surveys

Structured as a practical workbook, tools are provided for monitoring progress, and key tips for energy-efficiency are offered throughout. Energy Management in Plastics Processing: Strategies, targets, techniques and tools is priced at €105.00 or £90.00 or \$135.00.

To purchase, or for further information, please [CLICK HERE](#)

Cost Management in Plastics Processing: Strategies, targets, techniques and tools



The essential guide to intelligent cost management in the plastics factory:

- challenges the old-fashioned principle of minimising labour costs
- provides an alternative route-map through all areas where costs can be reduced or eliminated
- deconstructs the process of making plastics products to show how the cost is built up, and where money can be saved

"Keep the labour – sack the kilogrammes and the kilowatt-hours!" Cost Management in Plastics Processing: Strategies, targets, techniques and tools is priced at €90.00 or £75.00 or \$115.00.

To purchase, or for further information, please [CLICK HERE](#)