

New technologies in the spotlight

With visitors numbering at over 130,000, the Plastindia 2009 exhibition recently held in New Delhi, India, reaffirmed the importance of the Indian processing industry to spur on growth for the plastics industry. Keith Boi reviews some of the new technologies showcased

A general view is that with the large population growth and fast changing demographics in India, the business momentum for consumer goods and general packaging applications for plastics can be expected to remain resilient still.

This view was echoed at the recently concluded Plastindia 2009 exhibition, which was held in New Delhi from February 4 to 9, where there was indeed reasonable enthusiasm about the visible uptrend in various areas of plastics packaging.

On show at Plastindia 2009 was a 32-cavity HyPET 120 system from **Husky** that showcased reduced cycle times and higher machine throughputs for preform production, a system moulding solution appropriate for customers in the Indian packaging market.

Reduced energy consumption and its interchangeable mould components are

the machine's other advantages — Husky sees the HyPET 120 system as being well suited to beverage packaging converters in India that are producing smaller volumes of preforms (in the range of 50-100 million per year).

While the beverage packaging in the market of India is going through tremendous growth for its overall business in India, Husky also sees consistent growth opportunities mainly in the packaging and medical markets.

Especially as consumer spending goes up in India, the attractiveness of the package will become more important, and this is where the in-mould labelling (IML) techniques and multi-colour closure production capabilities that Husky is able to provide will be of greater interest.

"This is an emerging

market still and as the purchasing power of the population in India goes up, the consumption will increase at the same rate. In this current situation where customers are facing challenges, Husky helps them to maximise their assets and drive up manufacturing efficiency," said Dinesh Budapanahalli, Husky vice president of services and sales for global tooling.

The tooling side of the business has been building up exceptionally well for Husky, in spite of the current economic downturn, with more customers now making moulds of higher standards and complexity to specifically cater to the demand in the South Asia region.

To support the growth mode of its tooling business in India, Husky will be building a hot runners plant in Chennai, with manufacturing operations set to be launched in early 2010. "We are going through the final stages of deciding on our capital investment and the different activities on this plant location," Budapanahalli said.

Proximity to customer base, the availability of talent pool and port logistics accessibility are the main factors considered for Husky's first Indian tooling plant, its fifth tool manufacturing site in Asia overall, to be located in Chennai.

Generally, Budapanahalli sees sophisticated hot runners as having a significant role to play in helping Indian customers improve process efficiency: "Resin saving is one of the key reasons; part quality and cycle time reduction are important as well. Our customers will find that the payback and return on investment when an appropriate hot runner system is installed can be pretty quick."

Key growth markets for Husky's tooling and hot runners business in India are focused on the packaging, medical and the still burgeoning consumer electronics product segments.

"Activities in the consumer electronics sector are just starting in India over the last two years and there is a lot of promise for our tooling business in that segment," Budapanahalli said. "For packaging applications, the technology developments you see in India, from the tool-makers now able to do a very good job in devel-

Packaging innovations displayed at Husky's Plastindia booth; Dinesh Budapanahalli, Husky's vice president of services and sales for global tooling, highlighted some of the firm's development gains in India





Milliken launched its Millad NX8000 clarifying agent for polypropylene, aiming particularly at high end applications in houseware

them more incentives to invest in new technologies.

At the stand of **Rajoo Engineers**, a three-layer blown film line produced film with 3% thickness variation on a 40 micron/1,400mm lamination grade film at a rate of 453 kg/hour.

Ultrasonic sensor-based, multi-component gravimetric conveying with continuous blending and dosing, high output air ring with automatic profile control and fully automatic surface winder make up the overall extrusion configuration.

Rajoo Engineers president Sunil Jain is confident that this blown film line will be able to meet the latest processing challenges in

oping high-cavitation moulds for personal care product closures to the increasing light-weighting trend through the switch to using single-piece caps, are driven both by the multinational OEMs and domestic consumption in the FMCG market."


At the exhibition, **Milliken** launched its Millad NX8000 clarifying agent for polypropylene for the first time in India, targeting mainly high end applications in houseware, cosmetics and personal care markets. The additives maker's successful collaboration with India's Prime Housewares was also showcased, displaying how the Millad NX8000 additive is able to provide better quality and clarity than conventional clarification technologies.

Millad NX8000 was first launched at the K2007 exhibition and since then, a good share of its commercial developments has happened in the Asia Pacific region. In India specifically, Prime Housewares is now using the additive to manufacture a range of injection moulded clarified PP-based containers, as part of its efforts to improve the branding of its houseware products.

Kenneth Keh, Milliken's director of marketing and business development, said up to 15% market growth is expected for clarified PP products in India over the next few years — especially when a lot of converters and brand owners would look to achieve product differentiation by developing fresh designs or by means of making parts look better.

"A good indication for the growth is the reception towards clarified PP products in advanced houseware markets in South Korea and Japan," Keh said. "Now with the upgraded Millad NX8000 additive, converters can look to replace transparent resins such as PC and PS. Clarified PP can be a very cost effective option as compared to these traditional resins."

Keh added that firms in China and India are starting to get more into the branding aspects of their business, which would give

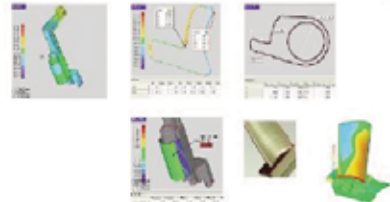


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the film segment, including recent trends towards sustainable processes through downgauging.

"Downgauging of the film is not only the function of the machine but also the property of the polymer," Jain said. "Polymers are now available for even going down to four to five microns for each layer, thus a total thickness of 12-15 microns, which our machine is also capable of processing."

Also at the exhibition is the company's rPET sheet line developed to produce 250 kg/hour of PET sheet in ABA configuration, using PET bottle flakes as the input. The sheet extrusion line comes complete with a crystalliser and dehumidifier. Rajoo's rPET line is further complemented with a fully servo controlled thermoformer, that offers advantages over hydraulic models in terms of low wastage, sheet indexing precision and lower compressed air consumption.

The rPET line equipment Rajoo developed is built in with metallic detectors and continuous screen changers to take care of potential contamination issues with the use of recycled PET bottle flakes, said Jain. When queried, he also pointed out that Rajoo has no plans yet to develop the sheet extrusion line and thermoformer as an inline system package.

"The markets in which we operate do not need high output machines where inline systems are justifiable," Jain explained. "Further, in our markets, quick changeovers of moulds are required since production volumes for a single product are not large. Thus, we prefer rPET Sheet lines with lower output levels (200-300 kg/hour) with off line thermoforming which is more suitable for our markets. Basically it is world class technology but at affordable output and price levels."

Rajoo also announced two technology partnerships during the show: a collaboration with US company Commodore for XPS disposable containers and cooperation with Italy's Techno Coating for PP sheet lines.

Other highlights

On the material side of things, **ExxonMobil Chemical** introduced a broad product portfolio that spans from polyolefin-based resins to its specialty elastomers range, including Santoprene TPVs, Enable metallocene PE (mPE) and Exxtral performance polyolefins.

The elastomeric slate on display includes the Vistamaxx specialty elastomers and Santoprene TPVs that can improve flexibility in polyolefin-based compositions. Santoprene TPV compounds are said to be ideal for electrical insulation and jacketing applications, while Vistamaxx specialty elastomers offer processing ease (in cast film, blown film, extrusion coating and injection moulding processes, and others) and com-



Sheet extrusion and blown film system equipment displayed at Rajoo's Plastindia 2009 booth

patibility with a wide range of polymers for new market applications.

A relatively new product of interest is the Enable mPE platform ExxonMobil has launched only last year now being, introduced to the Indian market for a broad spectrum of film applications. Its innovative design allows film processors to achieve substantial downgauging because the films produced are thinner but equal in strength.

Demand for petrochemicals is growing in

India, according to John Verity, vice president, polyolefins, ExxonMobil Chemical. "The country's economic infrastructure is expanding rapidly and we want to be a part of this growth," he said.

Pouch making equipment supplier **Mamata Machinery** is looking at the innovation drive for pouch packaging items, through the development of pouch making capabilities that can convert laminates and composites as well as unsupported bare polymer films at optimal speed.

Mamata's Vega series of all-servo pouch systems comes with the scope of supply providing unique combination of processing features, according to the company.

Five processing capabilities are combined on one machine: the ability to make zipper pouches in two lanes from co-ex

PA/EVOH-based films as well as bare polymers, the ability to make stand-up pouches in two lanes from a single web with zip and also conventional zipper stand-up pouches with independently printed, separate gusset inserts, the ability to make pouches with three web print registration like five-side seal and stand-up zipper pouches, the ability to make centre fin seal and lap seal pouches, and the ability to add the option of making slider zipper pouches at a later date.

Other views from the ground

"The Indian injection moulding machinery market is put at 3,100 to 3,300 machines a year. The machinery industry has been growing at a compound annual growth rate of about 16 percent for the last three years and is expected to maintain this growth rate in spite of the short term global economic uncertainties."

- N K Balgi, president of **Ferromatik Milacron India**

"As modern trade matures, consumer will demand product in packages that carry basic information like product descriptions, real time age, price, inventory status, authenticity. Polymers as well as converting equipment must conform to the local and global regulations."

- M K Banerjee, **Essel Propack** global director of creativity and innovation

"The uptrend in the export of polymers and processed plastic products has been maintained. The industry is providing direct and indirect employment to nearly 3.6 million people. However, the uncertain outlook is forcing the Indian companies to rethink investment plans."

- Shiv Singh Mehta, president of the **Organization of Plastics Processors of India (OPPI)**