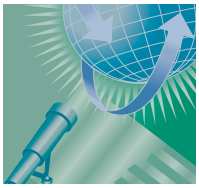

SPI machinery numbers confirm: 2009 was bleak

Final-year numbers from the Society of the Plastics Industry Inc. confirmed it: 2009 was a bleak year for plastics machinery sales. SPI's Committee on Equipment Statistics compiles the annual machinery data (www.plasticsindustry.org).

U.S. shipments of injection molding presses crashed to 1,285 units, a 47 percent drop from 2,444 units in 2008. The SPI machinery statistics reflect the severe recession.

Injection molding machines represent the biggest sector of plastics equipment. U.S. injection press shipments fell through the 3,000-unit threshold in 2007, then dropped below 2,500 in 2008. Extruders fared better than injection presses, down just 15 percent. SPI reported 711 extruders were shipped in 2009, vs. 836 the year before.

Auxiliary equipment mirrored the injection press falloff. SPI reported auxiliary makers had net bookings of $149 million worth of equipment in 2009, down 49 percent from the 2008 total of $292 million.

SPI said data for blow molding machines was incomplete. The Washington-based trade association did not release 2009 numbers for screws and barrels.

One bright spot is capacity utilization at U.S. plastics and rubber factories, which had rebounded in the mid-70 percent range so far this year. In 2009, capacity utilization stayed around mid-60 percent for most of the year. That means plastics processors are restarting machinery that had been sitting idle.

Optimistic growth in bioplastics

Green investments are the best way to beat the financial crisis, according to a summary of the findings of a poll conducted by the European Bioplastics Association of its members. The bulk of companies questioned reported healthy growth figures for 2009, in some cases considerably more than 5 percent up on the previous year. In May, 38 companies, among them many world leaders in polymer manufacture, revealed how they had fared in 2009 and voiced their expectations for the current year and 2011.

Forty-seven percent of companies recorded growth in turnover, while another 32 percent managed to at least draw level; only 10 percent of companies posted losses.

Respondents reported a positive overall trend for both this year and the year to come. In all, 80 percent of those polled were optimistic, with 20 percent anticipating satisfactory results, 40 percent good results and 20 percent excellent results. Based on these healthy expectations, two thirds of the companies will be increasing their investment in the sector this year.

An implant made of plastic may soon offer patients with the chance to see again

For many patients who become blind after an accident or illness, a corneal transplantation could restore the ability to see. Each year, 40,000 people in Europe — in Germany, about 7,000 — await the opportunity to be able to see again, thanks to cornea donors. But donor corneas are not common. Dr. Joachim Storsberg of the Fraunhofer Institute for Applied Polymer Research IAP in Potsdam-Golm developed material and production process for a corneal prosthesis made of plastic. These can help patients who are unable to tolerate donor corneas due to the special circumstances of their disease, or whose donor corneas were likewise destroyed.

The miniscale artificial cornea has to meet almost contradictory specifications: On the one hand, the material should grow firmly together with the cells of the surrounding tissue; on the other hand, no cells should settle in the optical region of the artificial cornea — i.e., the middle — since this would again severely impair the ability to see. And the outer side of the implant must be able to moisten with tear fluids, otherwise the implant will cloud up on the anterior side. Dr. Storsberg found the solution with a hydrophobic polymer material. This material has been in use for a long time in ophthalmology, such as for intraocular lenses. In order for it to satisfy the various characteristics required, complex development steps were necessary. The material was thoroughly modified on a polymer-chemical basis, and subsequently re-tested for public approval.

In order to achieve the desired characteristics, the edge of the implant was first coated with various, special polymers. The eye prosthesis evolved jointly with physicians and manufacturers in the EU project. The interdisciplinary research team needed three years to develop the artificial cornea. By 2009, a prosthesis was already successfully in use; further implantations are anticipated during the first six months of 2010.

U.S. demand for foamed plastics to increase

U.S. demand for foamed plastics is forecast to grow 2.7 percent annually through 2013 to 8.4 billion pounds, valued at $27.1 billion. Advances will be stimulated by a turnaround in building construction and motor vehicle production. Foamed urethane will continue as the largest type and expand to 4.3 billion pounds in 2013, driven by insulation and cushioning applications. Construction and packaging together accounted for nearly 60 percent of all foamed plastics demand in 2008. These and other trends are presented in Foamed Plastics, a new study from The Freedonia Group, Inc. (www.freedoniagroup.com).

Demand for foamed urethane is projected to increase at a 2.8 percent annual pace through 2013. Slightly better growth is expected for foamed flexible urethane than its rigid counterpart. Good growth is expected for foamed flexible urethane in motor vehicle and carpet underlay applications in light of rebounding motor vehicle and residential building construction markets. Foamed rigid urethane demand will exhibit rapid advances in building and tank/pipe insulation based on heightened construction activity.

Demand for foamed polystyrene will rise at a 2.3 percent annual pace to 2.5 billion pounds in 2013 due to myriad packaging and construction insulation applications. Packaging will continue to account for 70 percent of all foamed polystyrene's markets in 2013 based on cost and performance advantages over other resins and materials.

Foamed vinyl demand is expected to increase nearly three percent annually to 265 million pounds in 2013, buoyed by renewed vigor in the residential building segment. Foamed engineering plastics demand is projected to rise 3.4 percent annually to 315 million pounds in 2013 as a result of needs for more cost effective and higher performing materials. Foamed polypropylene opportunities will reflect the resin's low cost, high mechanical strength and other performance properties. The most rapid growth, however, is expected for much smaller volume biodegradable foam in light of increased availability and environmental awareness.