## **GENERAL MOTORS CONSIDERING GREATER USE OF ALUMINUM TOOLING**

The world's largest automaker, General Motors, is currently conducting trials to evaluate the possibility of using aluminum molds to replace steel in certain applications, according to a metal supplier at the recent CAMM trade fair.

"P20 is overkill in a lot of applications," the supplier said. "We've been talking with engineers at GM about converting (to aluminum) for a while and they are committed to making this work."

Aluminum has better heat transfer properties than steel,

## Continued from page 15

Europe, and has recently expanded its deliveries to customers in North America and Mexico. The plant recently manufactured and delivered a set of 17 shell molds in less than five weeks for a major PET molder of CSD beverage bottles in Mexico.

"This is a significant investment for us and highlights the benefits of lean manufacturing operations in a very demanding market," said Charles Carey, senior vice president, Packaging Mold Group at Wentworth Mold. "We plan to continue with future investment of Super-CELL operations in Poland and elsewhere in the world."

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A tour of Bohler Uddeholm's tool steel warehouse and the Bohler Uddeholm Thermo-Tech heat treatment operation in Mississauga were the focus of the Canadian Plastics Industry Association's Mould Makers Council meeting in September. Attendees were shown the sawing, machining and grinding equipment in the warehouse, which has a number of centralized functions to enhance efficiency. Chips are swept into an underground conveyor system for recycling, while coolant mist is conveyed to centralized equipment where it can be cleaned, filtered and reused.

Next door, the Thermo-Tech facility houses vacuum hardening furnaces and a full metallurgical lab. Thermo-Tech also performs vacuum tempering, atmospheric tempering, cryogenics and surface-enhancement treatments. A new data acquisition system allows the company easy access to customer-specific records.

During dinner, the moldmakers learned the causes of common mold problems, such as wear, corrosion and cracking. resulting in faster cycle times; however because it is less hard than steel, its use has generally been limited to prototype molds and low pressure molding applications. Tougher grades of aluminum, along with shorter product life cycles, have eased production concerns about aluminum tooling and convinced GM engineers to take a fresh look at using the metal in its tools.

"This (GM's trials) could have a potentially huge impact on the tooling industry," said the supplier.

## OFF-SHORE MOLDS SPUR MOLD REPAIR BUSINESS

Canadian mold builders say they have noticed a spike in repair requests, while demands for manufacturing have been lacking.

Progressive Tools, a division of Progressive Molded Products Ltd., designs and manufactures plastic injection molds. Since opening more than 30 years ago, the company has also been servicing existing molds. As of late, their requests for repairs have significantly increased. Rudi Degen, general manager, attributes this mainly to companies sourcing "offshore" to cut mold costs. He warns that choosing quantity over quality could prove to be an expensive error for some customers in the long run though. "They're buying tools from China, and Chinese tools often have lower quality standards...Initially, their cost will be lower, but due to the quality difference, at the very end of the tool's cycle, it will end up costing them more because it needs more maintenance." The slowdown in mold building contracts hasn't devastated business profits he says, because, even though each repair generates "lower dollar amounts, repairs are very frequent."

"We probably do 25% repairs now," says Tony Grossi, vice president of operations at Delmo Injection Molds. "People are not investing in new programs and new tooling anymore, so our customers are just trying to prolong the life of their tools." Delmo has operated since 1985 and designs and builds injection molds. The company's first couple of years were focused primarily on manufacturing, but soon after they realized the demand for repairs was lucrative. Grossi says repairs have less risks, higher profit levels, and take less time because the engineering is already completed. Nevertheless, he adds, "we don't actually go out looking for repairs. We take them to open the door to potential customers."

However, the repairs trend doesn't apply to everyone in the industry. Rob Fazackerley, vice president of sales and marketing at Garrtech Inc., says in blow molding, the molds are being built better every day due to better equipment. Because of the product's longevity, companies are more likely to replace the mold after ten years, rather than repair it. "We don't do a great deal of repairs. If it was 5% of our business, I'd be surprised," he says. "Typically with blow molds, what happens in the industrial side of business is often the only time you'll see a repair is if there's a catastrophe. Typically, the molds outlast the parts."

But Degen says that the Canadian mold industry should be concerned. "From people I've spoken to, sales have dropped a lot in North America due to outsourcing."

- By Trisha Richard

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