

Wis. molder Plas-Tech now all-medical, buys more presses

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LAKE GENEVA, WIS. (June 22, 1:50 p.m. ET) -- For the second time in four years, Plas-Tech Engineering Inc. is dramatically increasing the amount of its injection molding equipment, building on the success and growth of its medical business.

In the last 18 months, the Lake Geneva, Wis., company has added five all-electric JSW injection molding machines ranging from 60-200 tons of clamping force, and ordered equipment for an in-house tool room which it expects to be operating by the end of the year.

That brings its capacity to 13 presses, ranging from 40-300 tons of clamping force, compared to four years ago when it doubled the number of its presses to six and moved into a new 21,000 square foot facility.

"We will have the capacity to do twice as much business," said Scott Smith, vice president of sales and marketing. "We're expanding and positioned for 50 percent growth over the next 12 months."

The changes are designed to further fuel its expansion into medical — which now accounts for all of its revenue compared to 70 percent four years ago. The two smaller presses are designed to do sample work and speed design to product turnaround time, Smith said.

Founded as a mold design firm in 1990, Plas-Tech began manufacturing in 1999 with three presses and made products for the automotive, industrial, electronics and medical market. But five years ago, founder and President Aaron Hirschmann made the decision to switch completely to medical, a transformation that was completed this year. The plant itself is a white room and has a Class 100,000 clean room.

Plas-Tech concentrates on complex high engineered plastic components for a number of medical markets — including disposables, diagnostic consumables, surgical devices and medical device components for surgical and monitoring equipment — with product and material innovations one of its hallmarks.

In late May, for example, Tactical Medical Solutions Inc. of Anderson, S.C., introduced a modular tracheotomy surgical devices designed and made by Plas-Tech that is the first to combine the hook and blade into a single structure.

There are polycarbonate handles for both the hook and the blade, the first time the hook handle has been made of plastic for such a device, according to Plas-Tech.

"Typically, there is a separate device for the scalpel," Smith said. "But this is an all-in-one device," with the prime market medical field kits in war zones and the secondary market first-responder paramedics and emergency medical technicians. "It is portable, easy-to-use and doesn't take up much space in the kit."

"Medics now have more options and can perform techniques more efficiently, quicker and with greater safety," said R. Alan Hester, director of research and development for Tactical Medical.

“This is our first foray into developing a product for the military,” Smith said. “We think we can extend the concept into other in-field surgical devices. It is a cost-efficient product to make because instead of making two components, you are making one, using multi-shot and insert molding techniques.”

Plas-Tech produces the hook using insert molding. The blade component is made in a separate process by ultrasonically welding the blade to the polycarbonate handle.

Plas-Tech is also developing plastic pre-filled syringes for the drug delivery market, building on its success the last year with plastic pre-filled syringes for the cosmetics and aesthetics markets. The syringes provide an alternative to the glass syringes that dominate the market.

“We have been selling these syringes commercially for about a year into the aesthetics market and are in development right now on a number of pre-filled syringes for the drug delivery market,” Smith said.

The syringe is made from the cyclic olefin copolymer from TOPAS Advanced Polymers, a joint venture, based in Frankfurt, Germany, of Daicel Chemicals Ltd. and Polyplastics Co. Ltd. The U.S. subsidiary of TOPAS is based in Florence, Ky. The development of the syringe and the resin for the syringe was done collaboratively by Plas-Tech and TOPAS over the past six years.

“We made the investments in process development, tools, people and R&D,” said Smith. “Mr. Hirschmann felt it was important to develop a material that could set us apart as a medical molder,” said Smith, who called the opportunity to develop syringes made from the TOPAS 6013 COC resin infinite as 2.5 billion pre-filled syringes are made annually—97 percent of them from glass.

“We have replaced a three-piece assembly with a single-piece item,” said Smith. Glass syringes have a glass barrel, a separate tip that is glued to the glass and separate part that snaps onto the back for a backstop and a finger hole. “We have taken out assembly parts and have taken out parts.”

The plastic syringes offer high transparency and shatter resistance, and a total lower cost when assembly costs, and breakage costs at filling, shipping and at point of care are taken into consideration, said Smith. He also contended that the moisture barrier properties can help companies extend the shelf life of pharmaceutical applications in less demanding applications where polycarbonate and polypropylene are used.

“The opportunity for specialty resins designed to compete in the pre-filled syringe market is tremendous,” Smith said. And that is an equally as large opportunity to develop COC plastic cartridges and vials, he said. “It is a component that sets us apart and keeps us out of the commodity market” where the competition is offshore molders. “It is what you have to do to grow in this market.”

Smith said the tool room scheduled to start up in December will include a milling center, a bandsaw, an electrical discharge machine system and a lathe.

“This will allow us to turn around small tools internally,” said Smith. “That will help reduce lead time and cycle costs, and reduce costs because we won’t have to outsource those tasks. It will also help us develop some intellectual property in-house.”

It will also be an aid in testing new molds and doing R&D work, he said.

Plas-Tech makes syringe body components, including plungers, rods and tips, cartridges, intravenous components and medical components for surgical and monitoring devices and for diagnostic use, said Smith. “We are a profitable company and doing well. All the pieces are place to serve the medical industry.”