

INJECTION MOLDING

TOOLING

❖ Engineer | Build | Maintain

Electroform: Help wanted

If you think you've got what it takes to take U.S. injection molding to the next level of globally competitive productivity, a progressive moldmaker in Illinois has a job for you.

—Carl Kirkland

Apologies are in order. In our rush to honor it for having the absolute best, top-gun, rock-the-house exhibit at NPE 2006, we said sales were up 25% over the last three years at our honoree, Electroform Co. Inc. (Rockford, IL; see immnet.com/articles/2006/August/2910). We were wrong. In actuality, its sales are up by 125% since 2003, according to Electroform's president and CEO, Wade Clark.

As we reported, Electroform ran (in Progressive Components' booth) a robotized two-shot Engel press equipped with a hydroelectric, fully interchangeable tooling system it designed and built for in-mold decorating and assembly in less than two months before the show. To all of our jaw-dropping amazement, it produced fully finished race cars from six different parts.

"This was a very successful project for us," says Clark, "and we will continue to push the limits of in-mold manufacturing technologies."

Clark says his goal is to help Electroform's customers succeed. Why?

"Satisfaction—that's what I find—helping them to move ahead. We're always looking for customers with products that fit with our abilities to assist them in manufacturing improvements. And I'm looking for people who want

to be part of that success."

Local moldmaker makes good

A Rockford native, Clark's been in the business since he was 22 years old. His company's equipment capacity grew right along with his reputation for precision and problem solving. Seven years ago Electroform moved into its present location.

It specializes in high-precision, high-cavitation, hot runner tooling as part of its art-to-part, full-service capabilities. It also can provide fully automated, turnkey molding systems, including multishot and in-sert molding workcells.

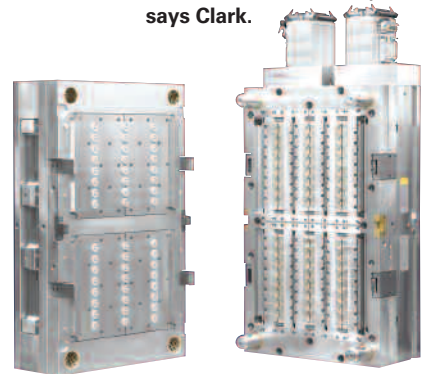
"We are injection moldbuilders. Our new direction is in setting up manufacturing systems for our customers—developing automation and systems integration with a different point of view," Clark says.

"Our tools are the core components of our manufacturing systems. What our customers want most is our knowledge of tools, knowledge which allows us to demonstrate to them how they can improve their manufacturing efficiencies through the application of new technologies, like in-mold decorating and assembly."

Its main building houses administrative offices and mold manufacturing systems. Right next door is its R&D and systems engineering facility, which, like the automated molding system mentioned above, was completed just before NPE 2006.



Top Moldmaker extraordinaire Wade Clark won accolades at NPE 2006, running fully finished toys in the Progressive Components booth. **Left** This complex single-cavity tool was in Electroform's shop for just 2½ weeks. **Below** "Multicavity molds are what we're best at," says Clark.



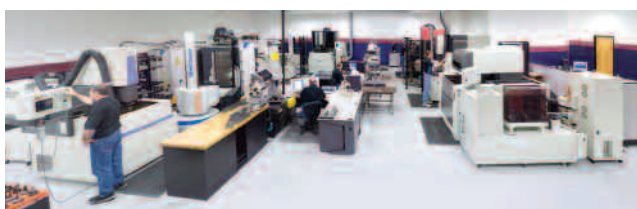
Both facilities are archetypes for Electroform's new operations in Greenville, SC and in Clearwater, FL. Total square footage of all facilities is 18,600.

Cellular moldmaking

It takes a cell to make a cell—that might be an Electroform motto. Serviced by state-of-the-art tool-changing robots, its moldmaking equipment is stationed in lean, compact manufacturing cells.

"We have processes and systems in

Right “We have the capabilities to set up the entire production environment for our customers,” says Clark. **Below** Electroform typically works to tolerances ranging down to ± 0.0002 inch.



Electroform's state-of-the-tech shop produces more than 100 molds/year.



place — manufacturing systems, engineering systems, and personnel systems. I believe that

these are some of the most important aspects of moldmaking,” Clark says. “The end result is our delivering a consistent product to our customers. For us, moldmaking is less about art and more about manufacturing.”

There's ample evidence of equipment standardization in Electroform's well-lit, epoxy-floored, air-conditioned moldmaking room—Mitsubishi EDMs, Haas Automation CNC machining centers, and both Roku-Roku and Mikron high-speed mills.

“We don't standardize on a machine just because of its speed, or its performance,” says Clark. “Reliability and technical support is what influences our decision to standardize. I'll have the same equipment anywhere I build, including in South Carolina and in Florida.”

Clark says he stays away from what he calls the shoot-and-ship projects, unless the customer can afford to do it right. Lead times typically range anywhere from two to 16 weeks, depending on the project's complexity.

“We don't always sell on lead times. Many of our tooling projects require additional automation and our customers sometimes struggle with their automation vendors' lead times to match our tool delivery times.

“However, with our past successes, we've found this to be an opportunity for Electroform to provide turnkey cells to our clients—it reduces the overall time it takes them to complete their programs.”

Tooling to tenths

Electroform's 24 moldmakers produce more than 100 molds/year for use in up to 500-ton machines with cavitation up to 128 for medical, packaging, consumer products, automotive, and electronics markets. Multicavity molds are Electroform's specialty.

It also builds insert, closure, and unscrewing molds, as well as molds for in-mold decorating and assembly. And it trials its molds and molding systems right next door.

Its R&D and systems engineering facility in Rockford houses seven presses from 100-300 tons for trialing and sampling runs, including multishot, horizontal, and vertical machines. Most of the company's own machines are Engel presses, and some sport Electroform's own black-and-silver color scheme. Two open bays are reserved for turnkey systems development.

It presently has four design engineers and three programmers on staff, working with Unigraphics, Pro/E, Powermill, and SurfCAM software.

“With us making the developmental investments, we're able to demonstrate to our customers the advantages of new mold and molding technologies, and of new design concepts that can maximize their production efficiencies, while minimizing their risk,” says Clark.

“We're an extension of our customers' R&D operations. Our early involvement helps customers reduce their product launch times,” he continues, adding an interesting point. He says his company can provide quick response time to engineering changes because Electroform's process doesn't rely on just one person. Each individual that works on any project is cross-trained. Each knows the role of his coworker.

Clark has ambitious plans for growth, but he believes the key to Electroform's expansion plans rests in its ability to build



Clark says Electroform's growth is contingent on finding talented moldmakers.

its workforce and build on the standards he believes are required to put good people in place.

Pursuing passionate people

I'm looking for that top five or 10 percentile of talented individuals out there,” says Clark. “We invest considerable time and money into training our employees. It's important for us to attract individuals with the right attitude, desire, and ability to learn.”

Electroform has developed its own training program. It's similar to an apprenticeship program, but it's more focused on Electroform's business model, particularly when it comes to cross training.

One of his moldmakers says, “Wade gives you an opportunity to think and grow. And he's not standing over your shoulders while you work. He allows us time to do our jobs.”

Clark concludes, saying, “I feel very fortunate to be a part of the industry I'm passionate about. We've assembled a great group of people here. Our achievements wouldn't be possible without our employees. I encourage personal growth and development, and it shows. We all share in Electroform's success and I'm looking forward to adding more talented individuals to this elite group.”

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