

FOR IMMEDIATE RELEASE

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by Carl Kirkland

Imagine what knocking more than 25% off a mold's cycle time could do for your bottom line. StackTeck® and its allies have opened a new center to develop molds using a new cooling technology to fire your imagination.

On a mission to speed the North American embrace of productivity-boosting mold cooling technology new to these shores—technology trademarked Ritemp™ that was developed in Australia by Ritemp™ Technologies Pty. Ltd.—moldmaker StackTeck® (Brampton, ON) has taken a major step. It's formed a strategic alliance with Ritemp™'s exclusive NAFTA rep, SWM & Assoc. (Burlington, ON), and with Domavista (Mississauga, ON), a mold design and engineering firm, to create the Ritemp™ Development Center for the Americas at StackTeck®'s HQ.

On a high-speed, accumulator-assisted press in its test room, StackTeck® recently began running a test part with a long cooling and hold time, a typically tough-to-cool HDPE pour spout for liquid detergents. It's running this part in a four-cavity Ritemp™-cooled mold built to prove the approach in practice. StackTeck® trademarks molds incorporating Ritemp™ technology as Super-Cooled.

The spouts typically run at around 12-second cycles on a conventionally cooled tool. They run at 8 seconds and faster in a Super-Cooled mold.

Ritemp™ bought a 4- to 5-second cycle time improvement for this application, and StackTeck®'s excited. After all, its bread-and-butter molds primarily are multi cavity, high-speed molds for killer apps. It offers application evaluations that include cycle time estimates, which can lead to cycle time guarantees.

Back-side cooling

Introduced on this side of the Pacific at NPE 2006, Ritemp™'s technology is engineered to eliminate any possible hot spots on your mold's surfaces regardless of part geometries. To do so, it turns the conventional idea of how to cool molds on its head. It uniformly cools mold surfaces by what you might call continuous, closed-loop evaporation and condensation of tower or chiller water loaded with a proprietary additive.

Conventional gun-drilled waterlines are replaced by high-speed machined water pockets behind the mold's faces—sealed cooling chambers that envelop your mold's cooling surfaces to remove heat uniformly and efficiently. After a vacuum is drawn in the cooling chambers to speed up the water boiling at a low temperature, the water vaporizes when it touches the mold surfaces.

Tubular heat exchangers in the top of each mold half instantaneously cool and condense the rising water vapor. The cool liquid is recycled back into the sealed chambers and the process repeats.

The turbulent flow of the liquid reduces any chance of sludge buildup within the chambers that could bog down mold cooling. And corrosion? No worries, mate; air is removed from the cooling chambers prior to production.

Also, you needn't worry about over- or under heating your mold. The discrete Ritemp™ mold temperature control automatically senses and adjusts water flow to regulate heat levels, according to StackTeck® sources.

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Productivity payoffs

The technology reportedly works with all common tool steels and uses only a fraction of the water of conventional mold cooling systems—the spout mold used less than a garden hose’s capacity for cooling both sides of the tool. And it’s completely independent from your molding press, so there’s reportedly no problem running a Ritemp[™]-cooled mold on an all-electric.

Uniform cooling for faster cycling of good parts is the key to this tech. And the Ritemp[™] Development Center is there to help get those cool new products commercialized faster by streamlining the learning curve of this globally patent-protected technology.

No upfront facility licensing costs are involved for the prototype and pilot production molds StackTeck® builds. Licensing costs don’t kick in until you start running production. Even then, they’re said to be minimal. And the ROI for a new mold running a faster-cycling Ritemp[™]-cooled mold reportedly is less than nine months. Anyway, if there’s in-house cultural resistance to licensing new technologies in your organization, SWM & Assoc. itself will finance the licensing costs.

Working with the newly formed Development Center on your Super-Cooled mold projects should allay any upfront payback concerns. In addition to being staffed by representatives of the firms mentioned previously, StackTeck® contributes its extensive and skilled human resources to the Center’s activities, including personnel with experience in DFM, prototype molds, automated mold design, and 3D data CAM programming.

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About SWM and Associates

SWM and Associates provides complete, optimized processing solutions through “best in class” technology partners that can reduce costs and increase margin through efficiencies gained in engineering, manufacturing and processing. Company founder and President Scott Molnar has a background in strategic sales and new business development with a Bachelor of Engineering and MBA degree. SWM is supported by a select group of North American based associates with relevant plastics experience in the areas of sales, applications, engineering, tooling, automation, process improvement and strategic marketing.