



W I N T E R 2 0 0 6

MoldMAX® Improves Cycle Times

INTERNATIONAL MANUFACTURER RELIES ON BRUSH WELLMAN FOR EFFICIENCY AND UNIFORMITY

RT Technologies recently utilized MoldMAX® HH (High Hardness-- 40 HRC) to improve cycle time as well as improve the dimensional control of the hub diameter.

MoldMAX HH is used in core and cavity inserts in the injection molding of RT Technology's office chair bases. Prior to using MoldMAX, RT Technology was using strictly steel in their molds. Compared to the old system that used all steel inserts, **molds using MoldMAX inserts run at a 20% faster cycle.**

Efficiency Starts at the Base

For more than 15 years, RT Technology has been guided by its basic objective of manufacturing well-made office furniture components. It is with that objective in mind that RT Technology selects its suppliers, choosing only those that meet the highest standards for the quality and consistency of its products and services. With thousands of products being manufactured by RT Technology, having efficient systems



The underside of RT Technology's chair base shows the intricate design of the piece.

throughout the manufacturing process is essential. Faster cycle times and reduced scrap rates are goals all manufacturing facilities



Injection Molding Machine - RT Technology's chair base mold with MoldMAX HH insert as seen at RT Technology.

strive to attain. To meet these goals and maintain their environmentally friendly commitment, RT Technology relies on products, services, and suppliers that enable, support and share their philosophy. This is why they turn to Brush Wellman for their mold material.

On a weekly basis, RT Technology ships 50,000 chair bases from its facility in Toronto, Ontario. They were using strictly steel in their molds, but found that by utilizing MoldMAX HH core and cavity inserts in the injection molding of their chair bases, they were able to decrease



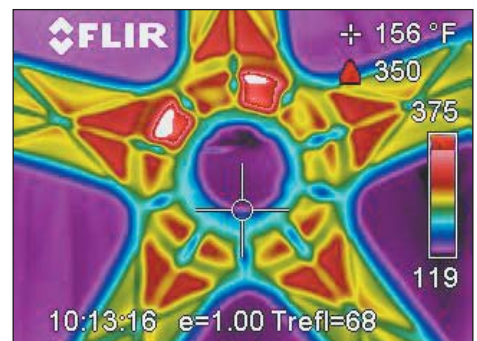
MoldMAX HH insert stands up well to the glass-filled nylon used in RT Technology's chair bases.

cycle time from 122 seconds to 98 seconds allowing for faster production throughout. **By using MoldMAX, RT Technology was able to increase annual production by 500,000 chair bases.** Additionally, they are able to produce their chair bases on 16 presses using MoldMAX tools whereas all steel tooling would have required 20 presses.

It's Getting Hot in Here

Uniform cooling temperatures are critical on molding applications. For more than 20 years, Brush Wellman has been committed to bringing high thermal conductivity and uniform cooling to the plastics market.

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IR imaging technology can identify hot spots making it an integral step in ensuring uniform cooling.

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Brush Wellman's reputation is one of the reasons RT Technology is using MoldMAX in the sections of their cores and cavities that are the most difficult to cool.

"We use the MoldMAX wherever uniform heat dissipation is required," said Paul Karim, Director of Plastic Development for RT Technology. "The use of this alloy dramatically improves the ability to cool the plastic."

Brush Wellman is working closely with RT Technology to provide an analysis of the high thermal conductivity and uniform cooling realized with the use of MoldMAX through infrared imaging. With infrared cameras and a knowledgeable staff, the company can literally look inside the mold and demonstrate, in real time, how and where the thermal management properties of MoldMAX can increase the efficiency of molding operations.

About Brush Wellman

Brush Wellman, a subsidiary of Brush Engineered Materials Inc., is the world's leading supplier of high performance alloys, providing high reliability copper beryllium and spinodal alloy products with unparalleled global service.

Brush Wellman's high strength, high conductivity copper alloys for molds used in the plastics industry are supported worldwide through a network of experienced metallurgists and application engineers.

The value added characteristics of Brush Wellman's mold alloys have successfully reduced parts costs substantially and produced more efficient manufacturing processes for customers. On average the cost differential of tool steel to MoldMAX is recovered in cost reductions within the first three months of production.

To learn more about Brush Wellman's mold alloys, visit www.MoldMAX.com or call 1-888-MoldMAX (1-888-665-3629).

MEET YOUR BRUSH WELLMAN PLASTICS TEAM MEMBER

Profiled: Tom Hazen

Tom Hazen, Brush Wellman North American MoldMAX® Sales Manager, has been with the company for 7 years. His primary responsibility is growing the Brush Wellman plastics tooling business throughout the United States and Canada. In addition to the growth of plastics, Tom supports the overall growth of Brush Wellman's alloy business in the Michigan and Ontario region.

Prior to joining Brush Wellman, Tom's experience includes selling tool steel for eight years and industrial supply

sales before that. He earned his Bachelors degree from Davenport University in Sales and Marketing.

In his free time he enjoys running and numerous sporting activities. He is located in Western Michigan with his wife and two boys.



Tom Hazen

Events

January 31-February 2, 2006: PLASTECH West, Anaheim, CA – Visit Brush Wellman at booth 5918.

April 25-26, 2006: MoldMaking Expo in Novi, MI – Visit Brush Wellman at booth 726. Complimentary exhibit hall passes are available! Contact Brush Wellman at alloypromotions@brushwellman.com to request your free pass.

Be sure to attend Session 23 of the Conference, **ECONOMICS OF HIGH CONDUCTIVITY MOLDS** presented by Brush Wellman's Doug Veitch. This presentation will cover cycle time reductions, machinability and durability of molds using high performance copper alloys. Application examples will be used to demonstrate actual payback calculations,

"Brush Ups" on Mold Alloys is a publication developed to keep you informed of advancements and trends not only in the plastics industry, but also within Brush Wellman's plastics segment of the Alloy Products group. Look for Brush Ups on a quarterly basis.

cycle time reductions and improved part quality. The types of plastics that are compatible for molding on tools made with high conductivity copper alloys will also be discussed.

Seminar is scheduled for Wednesday, April 26 at 9:15am-10:15am.

June 19-23, 2006: NPE in Chicago, IL – Visit Brush Wellman at booth 9310. Contact Brush Wellman at alloypromotions@brushwellman.com to be our guest! We will be happy to send you an invitation to receive \$60 off the onsite registration fee, so attendance will only cost you US \$30! Be sure to contact us prior to registration to receive your special guest rate.

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Providing Thermal Management Solutions

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