

Melt Management Magazine

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MELT SOLUTIONS RESOLVE COSMETIC DEFECT

**Added Benefits Using Melt
Rotation Technology Include
Cost Savings and Molding
Process Efficiencies**

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MELT SOLUTIONS RESOLVE COSMETIC DEFECT OF WINDOW BLINDS AND DRAPERY HARDWARE

Added Benefits Using Melt Rotation Technology Include Cost Savings and Molding Process Efficiencies

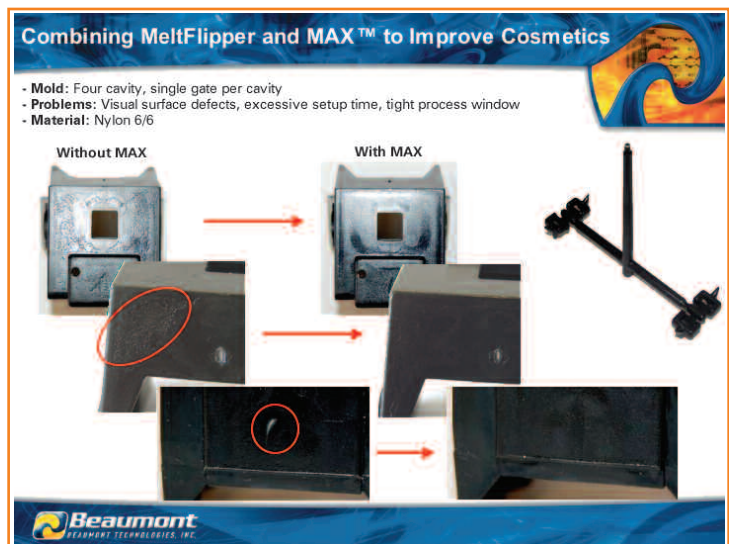
While a small cosmetic flaw in a virtually hidden part of a window blind may not bother a typical customer of this product, to Springs Window Fashions of Middleton, WI, it was totally unacceptable. And then, when they did find a solution by going “outside the norm” following several tries to tweak the mold and the process, they were further rewarded when technology that enabled them to mold a perfect part also saved them time and money.

Such was the case with Springs Window Fashions, the industry’s #2 manufacturer and marketer of quality Bali, Graber and Nanik blinds, shades and drapery hardware and other well-known names for which they privately label. Springs, engaged in a “Best Experience” corporate culture, requires that quality, service and associate engagement matter as much as product. This made finding a solution to this problem mandatory. But it wasn’t until they read about and attended a free seminar by Beaumont Technologies (BTI) in Erie, PA, that they discovered there were other ways to solve nagging production problems other than tweaking the mold or process. Further, molding personnel at Springs Window Fashions quickly learned that measurable and ongoing cost savings are another benefit seen from their investment in BTI’s technologies.

Defects Caused by Trapped Air

The part? Cord tilt housings made out of Nylon 6/6, of which only a portion of the part is visible on

the final assembled product. However, cosmetic defects caused by trapped air during molding were noticeable by internal and external customers. The design of the mold, admits company personnel, made it difficult to completely vent the mold on the opposite end of the part from the gate. As a result of this problem, a 5 percent reject rate added unforeseen costs to producing the part along with the need to spend about 2 hours a day cleaning the mold to produce parts “as defect-free as possible”.



“We also had to slow down the injection speed on our 230 ton Van Dorn press,” recalls Jim Raisbeck, Senior Plastics Engineer at the Middleton manufacturing plant. “This was necessary to allow as much air as possible to escape. And the additional cleaning time resulted in a production loss of nearly 6.5% per day, or a shortfall of about 972 parts per day.”

Raisbeck admits it was one of those ongoing production problems that he and the company just wanted to resolve without making expensive changes to the mold such as moving the gate or completely rebuilding the mold. They added flow channels to the part to see if they could change the filling of the part and thus eliminate the air entrapment. He also said they increased the parting line venting around the problem area to the point where it was very easy to flash the mold. But this, and other tweaking of the mold and/or process to eliminate the defects, still didn't achieve the desired results.

Finds Melt Management Technology

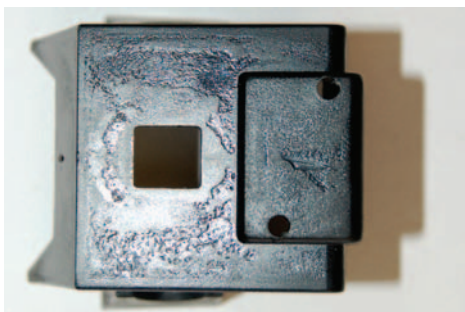
Going back into his memory bank, Raisbeck recalls having read about a new melt management technology and became intrigued enough to sign up for one of the many free seminars hosted by Beaumont Technologies, Inc. - the developers of various melt-management solutions. BTI by this time had just

launched the next generation of their technology – MeltFlipper® MAX™ - to provide a higher level of polymer control by creating shear symmetry in multiple axes of a melt channel. First developed to solve imbalances in hot runner stack molds, this new, patented technology had been proven to offer more uniform shear distribution in both traditional hot or cold runner systems.

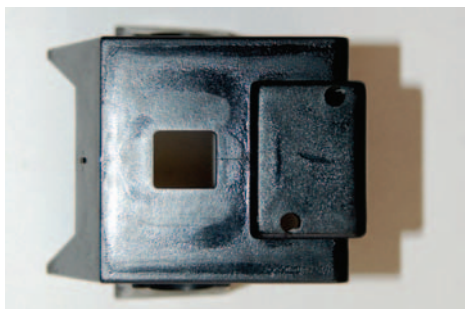
When using this technology, highly sheared laminates can be placed in the middle of the melt stream without the aid of static mixers, or symmetry can also be re-created along the outside of the runner, depending on the problem being solved. The MAX system has proven to eliminate issues associated with core-deflection, weld-lines, part warp and color uniformity as well.

Notes Raisbeck, “The ability of the MeltFlipper® MAX™ to enhance and change the flow inside the cavity and provide a more homogeneous melt condition for the cord tilt housings solved our cosmetic defect challenge. With MAX, we did not have to change part geometry or move the gate location.

“Since we acquired the BTI process for this program,” continues the Springs Window Fashions senior engineer, “we only need to clean the mold at the start of each shift, a normal procedure. This takes at most 20-30 minutes per day. Now our reject rate is less than 1%; but the best news of all is we get no more complaints about cosmetic defects from our customers. We can also inject the part a little faster without any detrimental effects. The incorporation of the MeltFlipper MAX technology will save us, in addition to a myriad of other headaches, more than \$40,000 throughout the life of this product. As a result of these cost savings, we are in the process of incorporating the technology into other ongoing and new projects.”



Without MeltFlipper MAX technology



With MeltFlipper MAX technology

Addendum

Beaumont Technologies, Inc., (BTI) headquartered in Erie, PA, offers a unique mix of products designed to optimize the efficiencies of the mold and the injection molding process. These products and services are part and process enhancing tools that help the injection molding industry become more competitive and profitable in world markets. The company's expertise lies within an in-depth understanding of polymer flow and processing technologies which enable molders and moldmakers to decrease lead-times while maintaining a high quality level of process and part control. Products include the patented MeltFlipper® melt rotation technology guaranteed to balance filling in hot and cold runner applications, the 5 Step Process™ mold commissioning software, CAE by BTI™ flow analysis services and specialized on-site training.

Conclusion / Company Contact Information

For more information on the process control technologies for injection molding, contact: Marketing Department, Beaumont Technologies, Inc. 1524 East 10th Street, Erie, PA 16511. Tel: 814-899-6390. Fax: 814-899-7117. E-mail: info@beaumontinc.com Web Site: www.beaumontinc.com.

For more information on the quality lines of Bali, Graber and Nanik blinds, shades and drapery hardware, see the SWF Web Site at www.springswindowfashions.com.

MeltFlipper, 5 Step Process, CAE by BTI, BTI Training and MAX are trademarked or are registered trademarks of Beaumont Technologies, Inc.

Profits/Business/Your Competitive Edge Slipping Away?

Is it because:

1. You aren't maximizing your molding capabilities?
2. Scrap and waste are cutting into your profits?
3. Startup is too slow, with mold debugging dragging you down?

Maybe it's time to get back to the basics.... using BTI's Technologies and Training Seminars

- A series of on site-training courses to help your staff understand how to improve the molding process, commission molds faster and know what goes on inside the mold.
- Proven technologies that are guaranteed to help you go from art to part more quickly, and mold higher quality parts at the same time.

BTI...Industry's Source for Mold and Process Optimization Technologies and Training



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