News@BTI Volume X, Issue 2 - April 2010

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BTI...Where the INDUSTRY Goes for ANSWERS

CAE Mold Filling Simulation * ProSeries Training Seminars * Rheological Control Systems * Mold Diagnostic Software * Consulting / Troubleshooting * Molding / Sampling Capabilities

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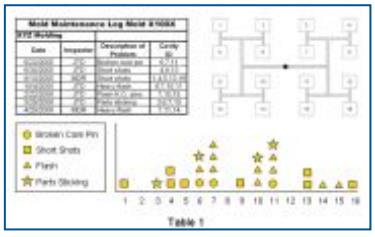
Beaumont featured in MoldMaking Technology Magazine article: "How to Systematically Diagnose Mold Filling and Part Quality Variations"



If you review the molds you've built and sampled over the years along with the new molds you may be sampling today, you will probably have a list of recurring problems (flash, non-fills, unable to pack the parts, dimensional variations, warp, broken core pins, poor cosmetics, etc.). And if you ask someone which cavity or cavities are causing a specific problem, you will probably hear "It's random. Sometimes the problems are in cavity 6, other times in cavity 3, and other times in cavity 7." But are those defects and mold problems really random?

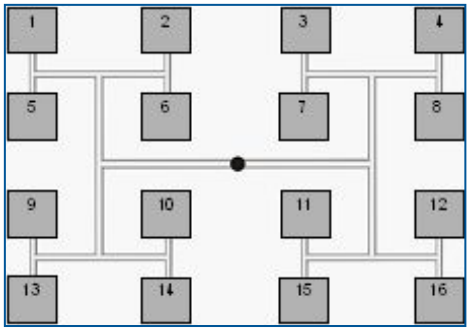
BTI's article was published within MoldMaking Technology Magazine in February 2010. To find out the answers to these questions, read the entire article online.

BTI's CAE Mold Filling Simulation Service and New Advancements in Mold Filling Technologies highlighted in SPE's Injection Molding Newsletter

The Spring 2010 SPE IMD Newsletter features BTI's "Advancements in Mold Filling Technologies", including iMARC and SRC mold inserts, Opti-Flo hot runners, and MeltFlipper services. In addition, BTI's CAE analyst John Ralston provides some advice and insight into various aspects of mold cooling analyses.
Visit pages 15-17 of the newsletter to review the advancements in Mold Filling Technologies, and pages 8-10 to learn more about CAE cooling analyses.

Download Spring 2010 SPE IMD Newsletter.

FillPro Training Course Highlight – What are Flow Groups, what are they used for, and how do I identify them?



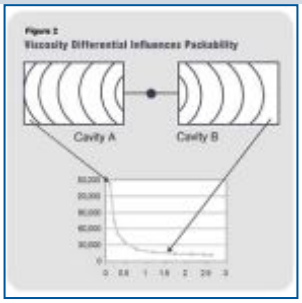
QUIZ: How many Flow Groups are in this mold layout?

Whether you work on the production floor or in mold making or in the QC department, you need to understand the answer to the Quiz question above. The three job functions mentioned each have their own individual responsibilities, but yet there is one common underlying aspect of injection molded plastic parts that affects each of those job functions.

Flow Grouping is a proven method of systematically diagnosing various mold filling and part quality variations based on the layout of the mold and through science of polymer flow. These Flow Groups, once understood and identified, will help you better understand the root causes of many of the problems you face regardless of whether the problems come from a new mold start-ups or from that troublesome existing mold that everyone cringes when it comes time to run again.

In a basic sense, Flow Groups are cavity combinations within a given mold layout whose positions (and problems) are common within the various Regions of a mold which are governed by fundamental plastic flow principles. They have been used to diagnose part dimensional variations, mold maintenance issues, and general mold filling problems. This is accomplished with Flow Grouping by teaching you how to sort out all the "noises" by looking at the data at hand from a plastic flow point of view. This gets you to the root causes of the problems so that you can then put together an effective action plan on resolving the issues.
To learn more, contact BTI about our FillPro training seminar , a 1-day course and part of our ProSeries training seminars.

John Bozzelli Discusses Critical Aspects of Balanced Filling in Plastics Technology Magazine (March Issue)



Scientific injection molding consultant John Bozzelli (www.scientificmolding.com) explains the critical nature of balanced filling on holding molding tolerances. This is done by examing a 2-cavity mold and evaluating the material viscosity within each cavity during filling and packing.

"Processors face a multitude of challenges whenever they approach an injection molding machine. One that has persisted for years (decades, actually) is the difficulty of getting multicavity tools to produce identical parts. While the financial benefit of multicavity production cannot be denied, rarely has the full financial benefit been realized. In many cases, the quality problems are so great that single-cavity production can actually be less expensive. So what is the problem with multi-cavity tools? Logic indicates that all one has to do is to geometrically balance the runners. Moldmakers do a pretty good job of this, but the problem persists nonetheless."

To find out, read the entire article online.

Tradeshows and Seminars

BTI continues to showcase our new range of products and services world wide. We have upcoming shows in the United States and in Europe throughout 2010, and we will also be a part of several technical conferences to offer our engineering insight into some of the most challenging problems faced by the injection molding community. Be sure to check our Homepage listings to keep updated on where and when we will be at the conferences.

PDx/Amerimold, Booth 724; May 11-13 in Cincinnati, OH

Register for FREE as our guest by entering VIP code 561BEA. We will be in booth 724.

. In addition to BTI highlighting our expanded products and services for product development and the mold making industries, BTI and Thogus Products have partnered to present a technical overview of how BTI's 5 Step Process software helped save time and money during a new mold start-up.

May 11, MOLD DIAGNOSTIC: How to Reduce Mold Debug Costs
2:15pm – 3:00pm
Mason V. Myers, Applications Engineer, Beaumont Technologies, Inc.
James Michalenko, Process Engineer, Thogus Products

ABSTRACT:
The debug procedure for new molds can be a daunting task. After all there are numerous factors hidden inside of the mold steel and plastic flow that wreak havoc on processors by creating a great deal of variation and

confusion. A systematic approach for diagnosing mold filling and part quality variations has been developed based on fundamental plastic flow characteristics. These principles establish "Flow Groups" within any given mold layout. The use of Flow Groups allows molders and moldmakers alike to better understand and solve the root causes of mold filling and part quality variation. It is this procedure that allowed an Ohio molder to save time and money by identifying steel variations—literally—in a rheologically-controlled hot runner mold. By following the Flow Group principles, the molder did not waste valuable press time trying to fight the laws of physics. Rather they used the data to isolate the troublesome drop and focus efforts on finding the root cause of the flow imbalances, which were found far outside of the mold and machine themselves.

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