Beaumont
BEAUMONT TECHNOLOGIES. INC.

News @ BTI

Volume VII, Issue 3 • July 2007

Inside this issue:

BTI is on the Move	**1**
MeltFlipper® Challenge	**1**
New 5-Step Software Version Now Available	**2**
Focus on Low Cavitation	**2**
Tech-Tip Cold Slug Wells	**2**
Upcoming Events	**3**
Q3 Webinar Schedule	**3**
About BTI	**3**

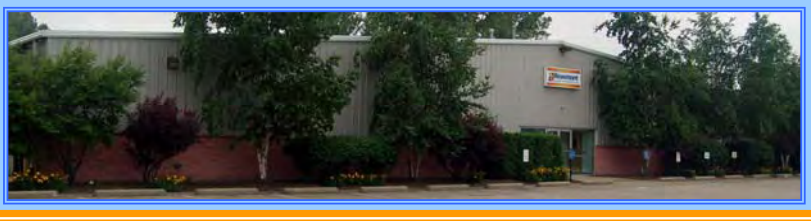
BTI is on the Move

For the second time in less than 5 years, growth at Beaumont Technologies, Inc. (BTI) has prompted the firm to move to newer and larger facilities, effective June 15, 2007.

Please update your records:
1524 East 10th Street
Erie, PA 16511 USA

Company founder and President, John Beaumont notes, "This most recent move was necessary to facilitate our expanding business and growth in our technical and sales staff, as well as to increase our R & D capabilities and test lab, which is now the home of several new injection molding machines. It also corresponds, almost to the day, with the anniversary of our business…"

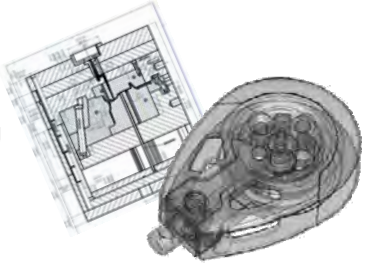
"Another customer benefit of our move to newer and larger facilities (12,000 square feet), among many others," says David Hoffman, Global Director of Technical Sales & Marketing for BTI, "are enhancements to our CAE services for providing verification studies based on actual materials and molding information. Official announcements on these new services will be made over the next few months."



Take the MeltFlipper® Challenge

What's the challenge, you ask? It's simple:

Send us mold drawings or sample parts from your most challenging molds in terms of filling imbalances, flash/non-fills, scrap rates, excessive mold wear, or part quality issues.

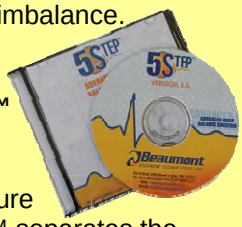


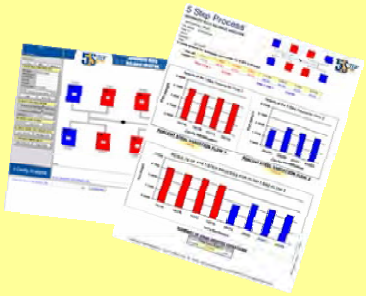
We will evaluate each mold and generate a report explaining the root causes of your problems and show how our products and services will eliminate your injection molding headaches.

As always, MeltFlipper technologies are **guaranteed 100%** to your satisfaction… So, what do you have to lose?

5 Step Version 2.0 Released

So you sampled the mold, performed a mold balance calculation and developed a percent imbalance. Great...now what? Beaumont Technologies, Inc. (BTI) now offers *Version 2.0* of their **5 Step Process™** advanced mold balance analysis software designed to answer those questions. By understanding the nature of polymer flow, the 5 Step Process™ separates the mold into flow groups which help the user to separate and quantify the various sources of mold imbalances.



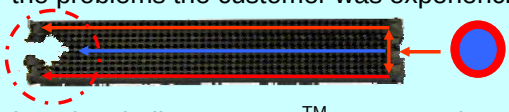


Updates to the new Version 2.0 include:

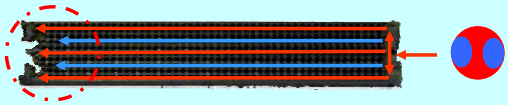
- Advanced graphical template driven interface
- New layout selections for 2-cavity, 4-cavity, 32-cavity, and 64-cavity molds
- Enhanced " Averager" feature
- Updated program graphics
- "Print Notes" option
- Integrated "Search" functionality into the file storage area
- Added "Machine Number" field for mold sampling

MAX™ Technology Focuses on Low Cavitation

Many parts such as connectors experience non-desirable backfilling patterns that lead to production and quality problems. When the customer came to Beaumont Technologies with the part shown below, produced within a single cavity mold, BTI understood the problem to be influenced by two main factors: 1) part geometry, and 2) perimeter shearing of the plastic. When you factor the two together, they can create a host of processing and part quality issues such as sporadic non-fills, gas traps, and weak weldlines... exactly the problems the customer was experiencing.



BTI designed MeltFlipper® MAX™ to ensure that the high sheared laminates from the outside of the runner's cross-section would be located in the center of the melt stream as the plastic enters the cavity. The idea was to make the plastic in the center of the cavity easier flowing, which in turn would help fill and pack out the center area of the part and reduce the amount of backfilling. Figure 2 shows the same part after MeltFlipper MAX was installed into the runner system. The results...a center-enhanced filling pattern which makes the part easier to fill while reducing the problems of weldline failures, gas traps, and non-fills. And all of this was achieved without changing gate locations or part geometry.



Tech Tip: Cold Slug Wells

The main purpose of a cold slug well is to capture the "cold slug" before it enters the part and causes typical molding and cosmetic problems. A common misconception is that the material at the flow front becomes cold as it flows. But keep in mind that plastic is fountain flowing, which means the material at the flow front is continually refreshed with hot material. Also keep in mind that the material does not continually flush in and out of a cold slug well. Once the well is full of material, it is rendered ineffective to capture a cold slug that may be in the flow path later.

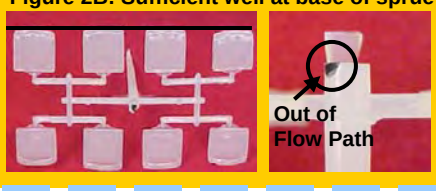
Cold slugs are un-melted pieces of material that may come from the barrel, but more often come from the nozzle tips. During injection, the cold slug gets pushed along the flow front and will travel down the sprue very quickly, and if not trapped in a well, it will eventually get stuck in the runner, gate, or part. This can cause several problems such as imbalances, non-fills, flashing, cosmetic issues, and so on (see figure 1). Therefore cold slug wells are incorporated into the runner design in an attempt to trap the slugs from causing problems. Standard practice is to place cold slug wells at runner intersections or turns. However, the damage may already be done. Cold slug wells in these locations are helpful and should not be ignored, but studies have found that adding a sufficiently sized cold slug well at the base of the sprue will capture nearly all nozzle cold slugs and prevent them from causing molding problems (see Figures 2A & 2B).

To learn more, please contact BTI about our Runner & Gating Design seminar.

Figure 1: Variation due to cold slugs

Figure 2A: Insufficient well at base of sprue

Figure 2B: Sufficient well at base of sprue



Upcoming Events

K-2007
Dusseldorf, Germany
Date: October 24-31, 2007
North American Pavilion #13
www.k-online.de

massPLASTICS 2008
Royal Plaza Trade Center
Fitchburg, MA
Date: March 26-27, 2008
www.massplastics.com

MME 2008
Rock Financial Showplace
Novi, MI
Date: April 23-24, 2008
www.moldmakingexpo.com

Technical Web Seminar Schedule

July 2007 - Advanced Mold Balance Analysis

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 9:00AM ET	6	7
8	9	10 10:00AM ET	11	12 9:00AM ET	13	14
15	16	17 9:00AM ET	18	19	20	21
22	23	24 1:00PM ET	25	26	27	28
29	30	31				

August 2007 - MeltFlipper® MAX™

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8 9:00AM ET	9	10	11
12	13	14	15	16 10:00PM ET	17	18
19	20	21 4:00PM ET	22	23	24	25
26	27	28	29	30	31	

September 2007 - Other Products and Services

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5 9:00AM ET	6	7	8
9	10	11	12	13 10:00PM ET	14	15
16	17	18 4:00PM ET	19	20	21	22
23	24	25	26	27	28	29

1524 East 10th Street
Erie, PA 16511

Phone: 814-899-6390
Fax: 814-899-7117
Email: www.beaumontinc.com

***Beaumont Technologies, Inc. (BTI)**, the exclusive licensor of MeltFlipper® melt rotation technologies, is the world leader in mold & process optimization technologies. MeltFlipper® technologies are 100% GUARANTEED to solve your problematic filling imbalances to ultimately achieve reduced scrap rates, faster cycle times, quicker time to market, and increased process efficiencies.*

*Our core products **(MeltFlipper®, 5 Step Process™, CAE by BTI™, and BTI Training™)** are successfully being used to help produce parts to Six Sigma quality standards in a vast array of industry segments. Contact BTI today and give us the opportunity to help your company become more profitable through our mold and process optimization tools – with **NO NEW CAPITAL EQUIPMENT REQUIRED***

Please visit www.beaumontinc.com for more details.