



# News @ BTI

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## WE'VE MOVED!

### Banner Sales Year in 2003 Creates Need for Larger Facility in 2004

Large sales growth last year fueled Beaumont Technologies' move to larger quarters. Please update your address book; our new contact information is:

2103 East 33rd Street  
Erie, PA 16510-2529  
Tel: 814-899-6390  
Fax: 814-899-7117

Web Site: [www.meltflipper.com](http://www.meltflipper.com)  
Email: [meltflipper@runnertech.com](mailto:meltflipper@runnertech.com)

"The move was prompted through growth spurred by an increased interest from custom and captive molders worldwide. The new headquarters, which is three times larger than our previous location, provides room for expansion

and hiring of additional personnel to serve the industry demand" says John Beaumont, president.



Beaumont founded BTI in 1998 to market his patented MeltFlipper® melt rotation technology. The firm has expanded its product line to include The 5 Step Process™ mold debugging software, specialized consulting services for complete scientific runner design and mold filling CAE analysis, and the Opti-Flo™ hot runner system available through a partnership with Incoe.

## NEW RUNNER DESIGN & MOLD PERFORMANCE EVALUATION SERVICE ADDED

### Processors Benefit From Low Cost Evaluation of the 5 Step Process, Develop Best Runner Design Practices, Too

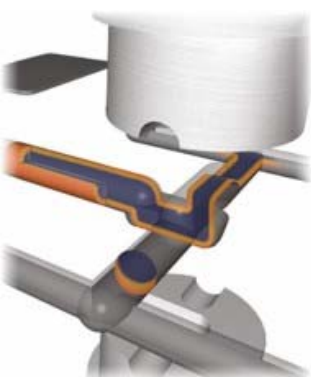
Now you can benefit from BTI's extensive knowledge of polymer flow and mold diagnostics - at cost. BTI is offering mold imbalance evaluations in existing molds plus runner design evaluations for new molds. As an added bonus to customers of this new service, BTI will credit the this cost towards the sale of any additional product or service offered by BTI.

For existing molds, BTI will use the proprietary 5 Step Process software to obtain answers to even the most vexing mold problems. For new mold designs, BTI will help ensure that the design meets the best standard practices for runner designs that the benefits of

reduced scrap, optimal balancing, and correct flow rates to and within the cavity are realized by the mold.

According to BTI President, John Beaumont, "The plastics industry has shown an interest in this type of service, and this is our way of giving the industry a valuable service at greatly reduced prices. By helping processors get their molds debugged, and by reviewing initial runner layouts, we're helping our industry recover and grow again."

Certain restrictions may apply and details can be found on the firm's Web Site at [www.meltflipper.com](http://www.meltflipper.com).





## CUSTOM TOOL & DESIGN TO BENCHMARK ALL MOLDS

*Evaluation Services Offer Value-Added Guarantee for Molders – And Their Clients*

Custom Tool & Design, manufacturer of molds for precision plastic parts used in the automotive, electronic, consumer and medical markets, has announced that each multi-cavity mold it designs will now be benchmarked and evaluated by Beaumont Technologies, Inc.

“This is strong stuff,” Jeff Mertz, vice president of Custom Tool & Design says of BTI’s MeltFlipper technology and 5 Step Process evaluation strategy, which makes it possible to identify, quantify, and separate steel variation from shear-induced filling variation. “We’ve achieved unbelievable results. It cuts down on our debugging, delivery, and qualification time quite a bit, while adding value to each and every mold we make. Customers are assured that when we design and build them a mold, it will be shipped free of any tooling or steel variations.”

“We want to provide our customers with the best possible mold performance

when they sample the mold for the first time...and this relationship with Beaumont Technologies helps achieve this. They provide us detailed reports that outline the source and magnitude of filling variation for each of our molds.”

**“We’ve achieved unbelievable results. It cuts down on our debugging, delivery, and qualification time...”**

Mertz added, “The melt rotation technology certainly makes our lives a whole lot easier. I believe it’s good for the entire mold making industry.”

Custom Tool & Design, also located in Erie, has over 30 years experience designing, building and qualifying unscrewing molds, connector molds and multi-action molds with highly contoured cores and cavities, with or without hot manifolds. For more information, visit the company’s Web site at [www.ctandd.com](http://www.ctandd.com) or contact Jeff Mertz at 814-838-9777 or [ctd@erie.net](mailto:ctd@erie.net).

Need help diagnosing your own filling imbalances? Contact us at 814-899-6390 or [www.meltflipper.com](http://www.meltflipper.com).

## MOLDMAKING TECHNOLOGY MAGAZINE

*Dave Hoffman Explains The 5-Step Process*

Moldmaking Technology magazine ran an extensive story outlining the uses, steps, and benefits of using BTI’s 5-Step Process mold commissioning analysis to speed lead times and improve part quality. Not the least among Dave’s reasons for giving mold analysis a try: faster invoicing, because you won’t have to wait as long for the mold to be debugged to get paid!

If you missed the story in the March issue of *Moldmaking Technology*, check it out using this link:

[http://www.moldmakingtechnology.com/magazine\\_articles.cfm?article\\_id=714&issue\\_id=114](http://www.moldmakingtechnology.com/magazine_articles.cfm?article_id=714&issue_id=114)

## BEAUMONT BOOK DEBUTS AT K SHOW

John Beaumont’s latest book, “The Runner and Gating Design Handbook: Tools for Successful Injection Molding,” will be released by Hanser Gardner at the K Show to be held Oct. 20-27 in Dusseldorf, Germany.

The book features full-color illustrations for clearest representation of design principles and will cover hot and cold runners, gate designs, and selection of gating location. The book will include two chapters on

shear-induced imbalance developed in the runner, which was virtually unknown until 1998 yet is probably the root cause of product variation across the industry.

Beaumont’s new book is

thought to be the first to focus on both hot and cold runners, and contrasts the uses of each from independent sources.



## CASE STUDY

**Company:** Dura Automotive Systems, Inc.  
Hannibal, Mo.

### DURA Automotive Systems

Dura, a part supplier to the Big Three automakers, was feeling pressure from a client. A production launch was scheduled, but they were unable to produce acceptable parts from their mold. The company's back was against the wall with little hope of resolving the problem until MeltFlipper melt rotation technology was implemented.

Dura's application was a parting line inject, four-cavity mold with multiple gates per part. The mold produces an insert-molded throttle body adjuster created out of a 33% glass-filled nylon. Flow imbalance was causing the insert to be pushed to the surface of the over-mold (see Figure 1). The mold was running at about a 50 percent scrap rate, obviously creating high scrap costs due to wasted inserts and material and press time requirements.

Beaumont Technologies worked with Dura and General Polymers to redesign the runner to include the MeltFlipper technology. BTI designed specific MeltFlipper geometry

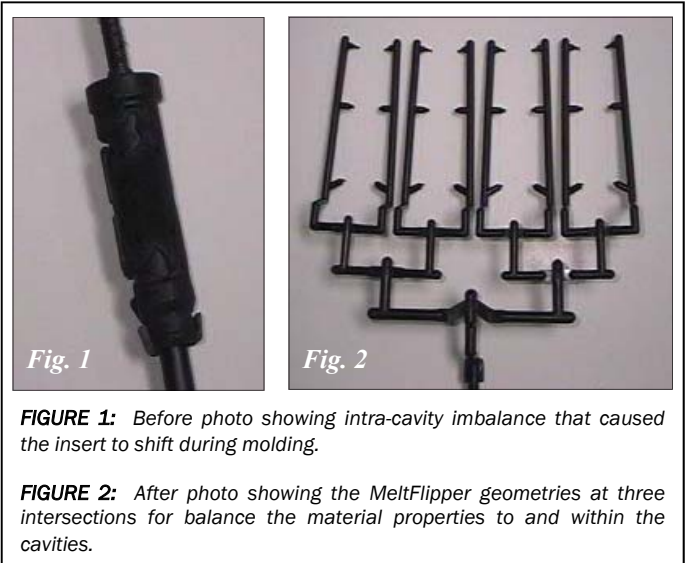


Fig. 1

Fig. 2

**FIGURE 1:** Before photo showing intra-cavity imbalance that caused the insert to shift during molding.

**FIGURE 2:** After photo showing the MeltFlipper geometries at three intersections to balance the material properties to and within the cavities.

due to the design of the parting line inject mold (see Figure 2).

Dura Automotive is elated with the results offered by MeltFlipper. In trials no inserts were pushed to the surface.

Dura is now able to meet the requirements of its customer using a balanced mold producing all four cavities within specification.

## Upcoming Trade Shows

BTI staff will be showcasing our technologies at two major plastics expositions this summer:

**MoldMaking Expo 2004** — June 22-24  
I-X Convention Center  
Cleveland, OH

**Thursday, June 24**  
Session 32, 8 to 9:30 a.m.  
MOLD FILLING DIAGNOSTICS  
David M. Rose, Sales Engineer, will be presenting the topic "Reduce Lead Times Using a 5-Step Approach to Mold Commissioning"

Visit [www.moldmakingtechnology.com/expo](http://www.moldmakingtechnology.com/expo) for more information.



**Plastics USA** — September 28-30  
McCormick Place East  
Chicago, IL

Visit us at Booth 2314

Visit [www.plasticsusa.org](http://www.plasticsusa.org) for more information.



**Beaumont Technologies, Inc.**

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**Revolutionizing Runner Designs  
for Injection Molding**

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WE'RE ON THE WEB:  
[WWW.MELTFLIPPER.COM](http://WWW.MELTFLIPPER.COM)

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*Beaumont Technologies, Inc. is the exclusive licensor of the MeltFlipper® technology developed by John Beaumont, an associate professor of plastics engineering technology at Penn State Erie. The company is dedicated to revolutionizing melt delivery systems and design practices for both hot and cold runners in the plastics industry. With further R&D and an in-depth understanding of plastic flow characteristics, BTI continues to grow and has now expanded its capabilities and services beyond the development of MeltFlipper technologies. The BTI staff offers full engineering support to MeltFlipper licensees in the various plastics industries.*

*The **MeltFlipper technologies** are patented approaches to melt-management and melt-rotation within a melt delivery system. The technologies reposition the shear-induced variations in hot **or** cold runner systems to create uniform filling and material properties in all cavities of a multi-cavity tool. By repositioning the melt to provide for natural symmetry, the MeltFlipper technology eliminates variations in temperature, viscosity, and other material properties to and within the inner and outer mold cavities. In addition to creating identical filling in high cavitation molds, the MeltFlipper technologies offer improved  $C_{pk}$ , reduced part scrap and costs, and a wider processing window. The MeltFlipper technology is a low risk investment due to its 100% customer satisfaction **GUARANTEE** to solve the problems associated with filling imbalances.*