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NPE 2003

OLD AND NEW TECHNOLOGIES MAKE NEWS IN CHICAGO

A 1944 Model 1 Van Dorn plunger press turning out parts meeting 2003 balance specifications with the aid of the MeltFlipper® was a huge hit at NPE.

Beaumont Runner Technologies shipped the antique injection machine to NPE to prove that melt rotation technology overcomes even the most primitive molding machine capabilities. BRT staff engineers were able to show that production of higher quality parts is not dependent on owning the shiniest new machine, but on harnessing the physical properties of melt after it leaves the injection nozzle. A shot from a mold retrofitted with MeltFlipper technology in half of the mold was compared between the 1944 manual molding machine and a 2002 all-

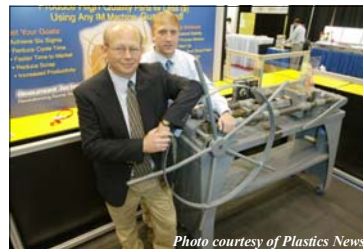


Photo courtesy of Plastics News

electric molding machine. What we see is no change in the imbalance within the shot on the side without MeltFlipper, but the side with MeltFlipper is balanced from **both** machines.

Granted the newer all-electric machines will provide better shot-to-shot consistency, but even with all the technology built into them they can do nothing to address the inconsistencies normally found within a given shot. That is where MeltFlipper technology comes in to solve the problem. Judging by the turnout at the booth and coverage we received in the NPE edition of *Plastics News*, our little press and MeltFlipper technology made a big impression on the industry.

OPTI-FLO™ SYSTEM WITH MELTFLIPPER TECHNOLOGY NOW AVAILABLE FROM INCOE

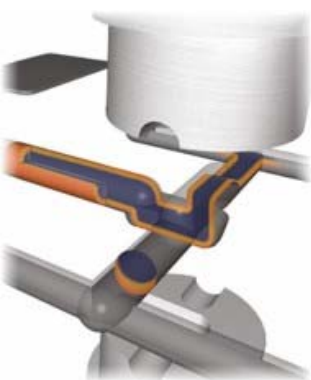
Making its debut at NPE was Incoe's new Opti-Flo™ hot runner system that includes MeltFlipper technology. This new runner system partners Incoe's pioneering innovations in hot runner manifolds and nozzles with BRT's knowledge of melt flow to create superior manifold balance and part quality from hot runner molds.

"Industry has finally had enough of unbalanced hot runner molds that cost thousands of dollars," says John Beaumont, BRT president. "The shear



imbalances that exist in hot runners can be solved in the same manner as cold runners - through melt rotation

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BUGGED BY YOUR MOLD? THE 5-STEP PROCESS NOW AVAILABLE ON CD-ROM.

Confused by mold commissioning? BRT feels your pain.



Debugging a mold during initial sampling can be a monumental task. That's why we've made the 5-Step Process™ available as an automated software program on CD-ROM – first introduced at NPE 2003.

The software was developed to meet increased market demands for faster mold startup and to help processors remain more competitive. “Tooling lead times are being reduced every day, and molders and toolmakers alike need to take advantage of every possible technology that may help them save time and money and make them more competitive,” notes John Beaumont.

The program is a self-contained database that easily allows the files to be shared with your colleagues or BRT staff for an in-depth mold review. The automatic report generator gives the user all the information needed to better and more quickly diagnose the molds in an easy to read one-page printout. The root cause of the imbalance can now be targeted, isolated, and resolved immediately, reducing overall commissioning time.

The first 5-Step Process CD-ROM covers geometrically balanced runner layouts for molds from 4 to 64 cavities. Additional standard layouts will be added as they are developed or requested by customers. Custom layouts will be quoted separately. Cost of the software is \$500 for a single license and \$1,500 for a site license.

Need more information? Please visit our website www.meltflipper.com/fivestep/fivestep.html or contact BRT directly at 814-899-6390 or meltflipper@runnertech.net.

BRT is 5 Years NEW!

Beaumont Runner Technologies turned five years new this spring!

Our thanks to everyone who's made time over the past five years to listen to our sermons on melt management. We know that we challenge the conventional industry wisdom. We know that you're busy, and that it's difficult to think about changing your production process, especially when you think that what you're doing “sort of” works, and bringing in a new (but improved!) way of doing things means you'll have to win over your boss, your boss's boss, and the company CFO. But also we know that many of you have fought your corporate status quo on this issue, have won, and now have increased profits to show for it.

The plastics industry is in trouble, and we truly believe that one of the best ways to better compete on a global scale is through melt management technologies. Newton's Law states that plastics melt in predictable ways, with predictable results. You can't fight the laws of physics, but you can harness them to your advantage to create a better product, more cheaply, in less time.

We look forward to working with you in the future. **Cheers!**

Opti-Flow with MeltFlipper (cont'd)

(Continued from page 1)

technology. Simple full elevation changes are not the solution to the imbalances in hot runner molds or cold runner molds. They alone can not create the rheological balance and consistently acceptable product.”

Opti-Flo™ promises an improved geometrically and rheologically balanced manifold that increases process capability and cavity consistency without flow restriction or pressure loss. Initial testing on a 16-cavity mold shows Opti-Flo reduces average shear imbalance from 18–20 percent down to 2–3 percent when six different materials were each tested at three different process speeds.

Opti-Flo will be marketed jointly by Incoe and BRT. For more information or a quote for your specific applications, please contact:

Incoe Corporation
1740 East Maple Road
Troy, MI 48083
248-616-0220; info@incoe.com



TOP 5 QUESTIONS ASKED AT NPE

Beaumont Runner Technologies received several varieties of questions during NPE in regards to MeltFlipper technology and our other services and products. We picked the best 5 common questions that directly affect you – our customers.

Q: **How much does MeltFlipper technology cost?**

A: There are two licensing options: **(1)** single license option for one mold at \$3,100, which includes the license for the patent, engineering and design work, and any required technical support, **(2)** annual site license for unlimited molds (quoted per customer). Per license costs under the site license option typically average less than \$1,300! If you are building more than 5 molds a year, for a cost savings to you we strongly recommend considering the site license at that point. Remember, we guarantee MeltFlipper 100% to customer satisfaction.

Q: **How do I justify the ROI for MeltFlipper technology?**

A: Even at the single license cost, our customers typically see an ROI before the mold even goes into production. If we save the customer one additional sample and mold verification study, the technology is already paid for in most cases. Additional benefits seen during molding production is pure profit at that point. In other cases, ROI is seen in less than one year due to faster cycle times, lower scrap rates, running without blocked cavities, improved efficiencies, and so on. BRT will be glad to help with your specific ROI justification needs.

Q: **How does MeltFlipper improve my bottom line?**

A: The benefits to MeltFlipper are numerous and normally are categorized into three areas:

Product: Fewer customer returns, uniform part dimensions, control and reduce warp, eliminate flash and short shots, higher part Cpk's, etc...

Process: Reduce cycle time, wider process window, lower injection pressure, lower clamp tonnage, etc...

Productivity: Faster mold commissioning, increased cavitation for high precision parts, reduced scrap rates, reduced down time, no blocked cavities, lower mold maintenance, etc...

Q: **Can you guarantee MeltFlipper will work with my material and my mold?**

A: Yes, we guarantee MeltFlipper technology 100% to your satisfaction, **period**. If it does not work for you, we refund your license fee. We have over 140 customers worldwide that back up our guarantee with a 100% success rate.

Q: **Can MeltFlipper solve the imbalance problems I have in my hot runner molds?**

A: Yes, MeltFlipper has now been successfully applied to hot runner molds. BRT is working with Incoe Corporation to market the Opti-Flo™ hot runner system with MeltFlipper technology designed inside. Please contact Incoe Corporation for more details at info@incoe.com.

NPE PRIZE WINNERS

Thanks to all who dropped by the BRT booth at NPE 2003 to say hello and meet our staff. We're pleased to announce the winners of our daily prize drawings.

FREE MeltFlipper® License

NPE Day	Winner	Company Name
Monday	Mitesh Sheth	Mercury Marine
Tuesday	James Roma	B Braun Medical, Inc.
Wednesday	Josef Herbert	Symbol Technologies, Inc.
Thursday	Ralph Cook	Integrity Plastics, Inc.
Friday	Kevin Wood	TI Group Automotive Systems, Inc.

FREE 5-Step™ Process Software

NPE Day	Winner	Company Name
Monday	Mike Montgomery	ITW Filtration Products
Tuesday	Earl Peters	Tech Tool & Mold, Inc.
Wednesday	Chris Alibozek	GW Plastics, Inc.
Thursday	Klen Drury	Fiskars School, Office, & Craft
Friday	Todd Nitsche	Argon Medical

John Philipsen of Donatelle Plastics Inc., and Nicholas Powell of Delphi Automotive Systems each received a copy of John Beaumont's latest book, "Successful Injection Molding: Processing, Design and Simulation," published by Hanser Gardner.



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Revolutionizing Runner Designs for Injection Molding



WE'RE ON THE WEB:
WWW.MELTFLIPPER.COM

Beaumont Runner 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, BRT continues to grow and has now expanded its capabilities and services beyond the development of MeltFlipper technologies. The BRT 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 Cpk, 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.*