

IN THE NEWS

AST will participate at the new PDx/amerimold show this year from 11-14 May in Cincinnati, Ohio. Attendees at the show will be able to find AST in booth #132, where these services will be featured:

- Component Design for Manufacturing
- Standard Tooling & Engineering
- Moulding Process Optimisation
- Assessment & Training

In addition to exhibiting, Andre Eichhorn, who is General Manager at AST, will present a paper on component design for manufacturing (DFM) on 12 May, from 3:15 - 4 p.m. Titled "Optimised Product Development", Andre's presentation will describe a real-world, shifted perspective approach utilized by OEM's in order to compress the product development timeline and control the production cost.

For those planning to visit this show, AST would be very happy to arrange a meeting. Email Andre at contact@ast-tech.de.

CASE STUDY: TOOL COST VS. TOOL PROFITABILITY

When working with customers AST takes care to ensure that tool quality and performance will not be adversely affected by the mould buyer's quest to control costs. Low tool prices can often lead to problems in production such as splitting, shut off, cooling & venting, by not taking care of simple tool design rules during the tool build.

For example, by using 3-plate cold runners instead of hotrunner technology, further savings on tool costs can be achieved. However, they ultimately cost more due to the reduction of process control and performance and because they use up a lot of resin, which directly impacts piece part price. In addition, one must deal with the bad appearance of gate points on direct gated components.

By introducing hotrunner technology to mass production moulds, especially for higher volume products, a savings of up to 80% on resin, plus better process control and performance, can be achieved depending on the component weight. Additionally, wear from the use of low quality steel and not using protective coatings will always lead to shorter tool life.

What is needed is a cost competitive but profitable mould that suits the requirements of the product and the local mass production environment. Having the right tool specification in place with tool design guidelines will help achieve that balance.

Let AST Technology help you find the right balance in your next mould project. Visit www.ast-tech.de to learn more.



Andre Eichhorn to present "Optimised Product Development" at the PDx/amerimold conference on 12 May.

Case Study Material Costs	3-Plate Tool	Hot Runner Tool
Mold Price per tool	€25,000.-	€32,000.-
Production Volume	5,000,000	5,000,000
Needed production tools	2	2
Material price / kg	€3.- / kg	€3.- / kg
Component Weight	6.5 gr.	6.5 gr.
Runner Weight	5.2 gr.	0 gr.
Mould Tool investment	€50,000.-	€64,000.-
Component cost (material)	€97,500.-	€97,500.-
Coldrunner cost (material)	€78,000.-	€0.-
Overall Production Costs Incl. Tool Investment	€225,500.-	€161,000.-

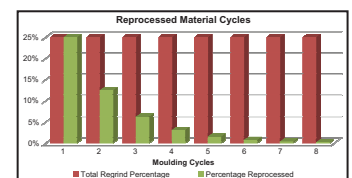
Material savings on the overall project by utilizing a more expensive hotrunner tool are working out at €64,500.- for this component.

VIEWPOINT

Adding regrind to a component is an efficient way of reducing costs and helping the environment by re-cycling. However, moulded part properties can be badly affected if the level of regrind introduced is too high.

Factors to consider include how demanding the application is (material properties are reduced including mechanical strength and chemical resistance), equipment required, and process location – closed loop at the moulding machine or remote location.

When using a closed-loop system at the moulding machine, over a period of time the regrind material will be re-processed many times as shown in the graph. The example shows a 25% regrind addition. After six moulding cycles the material moulded during the first cycle is still present within the component but has reduced to a level of less than 1%. When testing the component it is important to allow the process to settle and run for a period of time before selecting samples to ensure that this is taken into account.



AST recently assisted a customer with introducing regrind into an existing product, resulting in a direct saving of €15,000 per year in raw material. Work is now underway to implement savings in other components within the product range that will yield a projected savings of €190,000 per annum.