MuCell Seminar at ENGEL UK

Resource- and cost-efficient lightweight design

Schwertberg, Austria – July 2015

More than 230 plastics processors visited the ENGEL UK technology centre in Warwick to learn about the possibilities and opportunities offered by MuCell foam injection moulding. This made the two-day event one of the best attended seminars on this topic in the injection moulding machine manufacturer’s global training programme. ENGEL had issued the invitation in collaboration with Jaguar Land Rover and other partners.

Together, the companies demonstrated the potential that this technology has for carmakers and their suppliers. "MuCell offers the opportunity of combining resource-efficient lightweight design with a high degree of cost efficiency and excellent component properties," as Graeme Herlihy, the CEO of ENGEL UK points out. "This combination will ensure that the process continues to rapidly gain importance."

Under the ENGEL foammelt banner, ENGEL offers single source production cells for MuCell structural foam moulding. ENGEL imports MuCell systems from Trexel, USA, for its customers, handling control and safety integration with the injection moulding machine, and offering application-specific consulting. This makes implementing the technology really easy.

Jaguar Land Rover and Plastivaloire point out large application potential

The keynote topics at the event included MuCell-compliant component design, filling simulations, creating premium surfaces in the MuCell process, and the cost-efficiency of the process. Michael Fischer from ENGEL Austria, Harald Heitkamp from Trexel and Fabien Buchy from Mouldex3D presented innovative solutions and offered a sneak preview of future challenges and developments. Ian Ray from Jaguar Land Rover and Dominique Manceau from Plastivaloire in France reported on the potential for their products.
The keynotes clearly illustrated how structural foam injection moulding transcends the limits of compact injection moulding and opens up new degrees of design freedom. Components produced in structural foam injection moulding have proven to be highly dimensionally stable, and are free of sink marks. Because foaming enhances the flow properties of the melt, even challenging geometries with undercuts are completely filled. At the same time, foaming reduces the material use and the component weight – by up to 20 percent for the product examples on show.

**Live demonstration with dual technology integration**

In a live demonstration at the technology centre, ENGEL took up one of the latest trends: the combination of MuCell with other process technologies. To manufacture ready-to-use components in high-gloss piano black, both ENGEL foammelt and ENGEL variomelt for vario-thermal mould temperature control were integrated with an ENGEL e-victory 120 injection moulding machine with an integrated ENGEL viper 6 robot. Sample parts were injected during the event. Among other applications, this dual technology integration opens up new efficiency and quality horizons for interior applications.
On the two days of the event, sample parts were injected using the MuCell process on an ENGEL e-victory 120. Vario-thermal mould temperature control ensured a premium, high-gloss finish.

The sample parts on show clearly demonstrated how MuCell can help to save up to 20 percent weight.
The hosts, Ian Ray from Jaguar Land Rover (left) and Graeme Herlihy from ENGEL AUSTRIA gave the seminar attendees insights and previews in the field of foam injection moulding.

Pictures: ENGEL

ENGEL AUSTRIA GmbH

ENGEL is one of the global leaders in the manufacture of plastics processing machines. Today, the ENGEL Group offers a full range of technology modules for plastics processing as a single source supplier: Injection moulding machines for thermoplastics and elastomers, and automation, with the assurance that individual components are also competitive and successful in the world markets. With nine production plants in Europe, North America and Asia (China and Korea), and subsidiaries and representatives in more than 85 countries, ENGEL offers its customers the excellent global support they need to compete and succeed with new technologies and leading-edge production systems.

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