



Press release



EXJECTION® Technology Wins Austrian State Prize

Schwertberg/Austria – January 2010. EXJECTION® technology supports the production of long sections and rails with integrated fitting, closure, reinforcing and decor elements via a single injection point in a single production cycle. We chose a fully electrical ENGEL e-motion injection moulding machine for this process as it guarantees the required level of process integration. IB STEINER has now been awarded the 2009 State Prize for consulting / engineering consulting for the development of the EXJECTION® process.

The State Prize for consulting / engineering consulting seeks to identify and promote excellent, exportable solutions from the wide-ranging field of engineering achievements in Austria. From many candidates for the year 2009 the Engineering Office for Plastics Technologies of DI Gottfried Steiner (IB STEINER) won the prize in recognition of the development of EXJECTION® technology.

EXJECTION® process

What the Exjection® process basically does in comparison to legacy injection moulding techniques is to move the mould insert that forms the section in sync with the injection movement at right angles to the machine's longitudinal axis. The motion of the mould creates a continuous free cavity volume that is continually filled by melt flowing into it. Thus, injection moulding of long, thin-walled, plastic sections of a defined length is no longer restricted by the fluidity of the plastic in a cooled mould, thanks to the EXJECTION® process.



The fully electrical ENGEL e-motion injection moulding machine was chosen for developing this process. Besides the main machine movements, the mould insert is also driven synchronously with the injection movement by means of an electrical servomotor and a ball screw. Excellent platen parallelism and uniform distribution of compression over a given area, as provided by the e-motion clamping units in the mould area, not only avoid the burrs, but also ensure that very little force is required to move the mould insert when the clamping force has been built up. ENGEL developed an EXJECTION® software tool to control machines using this new process. Initial serial machines have already been deployed on the market in the production of light facings and trims.

Thanks to the EXJECTION® process, extremely long parts can be produced with a lower melt pressure and lower melt temperature compared to legacy approaches. The ability to use smaller injection moulding machines is typical of the EXJECTION® process. Besides considerably improved energy efficiency, lower investment costs also mean a significant reduction in manufacturing costs.

The 2009 State Prize for consulting was handed over 23 November 2009 and is an initiative by the Austrian Federal Ministry for the Economy, Family and Youth in cooperation with ACA (Austrian Consultants Association) and the Professional Association of Engineering Offices of the Austrian Chamber of Commerce.



DI Thomas Krivec and DI Gottfried Steiner holding the State Prize certificate in front of an EXJECTION® machine based on an ENGEL e-motion.

ENGEL AUSTRIA GmbH

The ENGEL brand denotes the world's biggest manufacturer of injection moulding machines and, at the same time, one of the world's leading plastics processing machine manufacturers. 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, as well as automation, with the assurance that individual components are also competitive and successful in the world markets. With eight production plants in Europe, North America and Asia (China, Korea) as well as subsidiaries and representatives in over 85 countries, ENGEL offers its customers the optimal global support they need to compete and succeed with new technologies and leading-edge production systems.

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