



Co-operation with Leistritz Extrusionstechnik GmbH

ENGEL builds 2-colour injection-moulding compounder

Schwertberg/Austria – October 2007. Improved mechanical properties of the final product as well as significant savings in material costs and energy. These are just a few of the advantages of injection-moulding compounding. ENGEL, in co-operation with the Nuremberg-based extrusion specialist Leistritz, have now developed a 2-colour injection-moulding compounder. The ENGEL duo machine with an integrated ZSE MAXX extruder makes it possible to continuously and directly introduce the compounded material into the injection moulding process. The ENGEL advantage: if required, the injection moulding machine can also be operated independently of the extruder for standard injection moulding processes.

During compounding, different thermoplastics and other materials are prepared with additives using synchronous twin-screw extruders. Depending on the additive, the material receives specific characteristics which determine the properties of the final product. In injection-moulding compounding, this process is integrated directly into the injection moulding process. Here, the extruder transports the plasticized material through heated melt lines into the barrel. During injection and the post-injection pressure, the mass is put into intermediate storage in a melt pot. Due to this in-line compounding, the product does not have to undergo another round of energetic stress; this results both in an economic advantage – up to 50% power reduction – and often in improved mechanical properties of the final product. For example, the length of glass fibres is generally retained. Accordingly, the areas of application are mainly in the automobile industry, but also in the areas of packing (pallets, boxes) and in processing natural fibres.



ENGEL co-operates with Leistritz

In co-operation with the Nuremberg-based Leistritz Extrusionstechnik GmbH, ENGEL have now developed a 2-colour injection-moulding compounder. Integrated in a 1000 t duo machine, the ENGEL injection-moulding compounder offers a number of advantages. For example, when the machine is used as a “universal machine”, it can also carry out the functions of a standard injection-moulding machine. Multi-component applications can be provided very easily due to the construction and high degree of flexibility of the Leistritz ZSE MAXX extruder series with the help of a piggy-back unit. The sequence – with standard plasticization, a melt buffer (with the ENGEL post-injection pressure technique) and a twin-screw extruder – allows the compounder to process continuously, making it also suitable for difficult compounding jobs. Other advantages: the low height and the simple (decoupled) arrangement with optimal possibilities for automation. As a result, the machine is easier to access for maintenance work; due to the separate side-by-side construction, vibration effects on plasticizing are eliminated.

Particularly today, when increasing prices for raw materials force manufacturers to again and again think about alternatives, the injection-moulding compounder is an ideal solution. The double value added as a result of (plastic) shaping AND material preparation represents a significant advantage. Furthermore, with the help of compounding that is integrated in the injection moulding process, the user can build up his own recipe know-how and can also cheaply create small batches with special compounds.



Fig. 1: ENGEL injection-moulding compounder with an integrated ZSE MAXX extruder of Leistritz.



Leistritz Extrusionstechnik GmbH

The LEISTRITZ GROUP see themselves as a tradition-rich and innovative partner in aerospace industry, energy technology, ship and machine construction, as well as the plastics and automobile industries. The LEISTRITZ GROUP employ approx. 2000 staff throughout the world and have branches and sales offices in every country in Europe. As a 100% subsidiary of the LEISTRITZ AG, LEISTRITZ Extrusionstechnik GmbH have been manufacturing extruders and extrusion machines for the plastics industry at their Nuremberg location since 1937.

Engel Austria GmbH

The Engel brand denotes the world's largest 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 its customers a single-source for a full range of plastics processing technology modules for: injection moulding machines for thermoplastics and elastomers and automation, with the assurance that individual components are competitive and successful in world markets. With eight production plants in Europe, North America and Asia (China, Korea), subsidiaries in 17 countries, and representatives in over 70 countries, Engel offers its customers the comprehensive, global support they need to compete and succeed with new technologies, and leading-edge production systems.



Contact address for inquiries:

Gerd Liebig, Group Marketing Director, ENGEL AUSTRIA GmbH,
Ludwig-Engel-Straße 1, A-4311 Schwertberg/Austria, Tel.: +43 (0)50 / 620-0, Fax: -3009
E-Mail: gerd.liebig@engel.at

Eva Haslinger, Marketing Manager Public Relations, ENGEL AUSTRIA GmbH,
Ludwig-Engel-Straße 1, A-4311 Schwertberg/Austria, Tel.: +43 (0)50 / 620-0, Fax: -3009
E-Mail: eva.haslinger@engel.at