Denk Kunststoff Technik GmbH, Gevelsberg, Germany
Technologically complex plastic parts for the automobile industry

Absolute top quality and reliability in the production of technologically sophisticated parts tailored to customers’ demands – this is the challenge Denk Kunststoff Technik, based in Gevelsberg/Germany, has set out to meet, since last year with the help of an EcoPower from WITTMANN BATTENFELD.

Denk Kunststoff Technik was established 20 years ago. In 2009 the company, managed by the two brothers Falk and Lars Denk, moved to its present location in Gevelsberg. It now has a workforce of 80 and realized 15.5 million Euros in sales in 2014. Since the beginning of 2015, Denk Kunststoff Technik has now also been operating a facility in Nanjing, China, where 5 associates produce parts on 3 injection molding machines.

The company’s customer base consists almost exclusively of well-known automotive suppliers in Germany, North America, China, Spain, the Czech Republic and Romania. In recent years, Denk was able to achieve an annual growth in sales of about 15%. The company owes this success primarily to its strong focus on meeting its customers’ desires and requirements with simultaneous minimization of administrative procedures. In this way, it is able to offer sophisticated solutions geared to the special needs of its customers at competitive prices. An in-house mold making shop – capable of producing any required mold – and an in-house mechanical engineering department to make specialized machinery ensure complete internal system integration within the company. Lars Denk sees his company as an “early follower” able to adapt complex processes quickly and effectively. For both Falk and Lars Denk, it is important to find the best process for every application.

In addition to in-house mold making and mechanical engineering of special machinery, automation is also designed in-house. Jointed-arm robots are used almost exclusively. Interim process steps such as welding are also implemented in-house at Denk. Product development is project-related. Application technology with
the objective of continuous process development and improvement plays a vital part at this company.

As an automotive supplier, the company must give top priority to the quality of its products and processes. Denk is certified according to DIN ISO 9001 and VDA 6.1. ISO/TS 16949 certification is planned for 2016.

The company’s technologically complex products include 2-component parts such as door check housings, plastic parts with metal inserts, plastic hinges, parts for the engine compartment and much more.

Sustainable management is another special concern for Falk and Lars Denk. In this respect, the two brothers are really enthusiastic about the EcoPower 300/1330 delivered by WITTMANN BATTENFELD at the beginning of March 2014. Lars Denk comments: “This machine consumes next to no electricity and operates with an extremely low noise level and high precision as well. That was something we could not have imagined before.“ Falk Denk finds the KERS system (Kinetic Energy Recovery System) of the EcoPower particularly impressive, since it enables recovery of the released braking energy for re-use within the machine.

Important features from Falk and Lars Denk’s point of view in addition to the energy efficiency and precision of their machinery are above all reliability and a long service life. On this account, WITTMANN BATTENFELD has already proved its competence with a hydraulic HM machine with 150 tons clamping force delivered to Denk 10 years ago and equipped with a BATTENFELD automation system, which is still in operation today, and a rotary table machine from the VM series with 110 tons clamping force.

Apart from the quality of the machinery, service and after-sales support by the machine manufacturer’s sales team are also high up on Denk’s list of priorities. Falk Denk comments: “The best machine is no use to us, if the service is not up to standard. Here too, we are fully satisfied with WITTMANN BATTENFELD.”
Fig. 1: from the left: Falk Denk of Denk Kunststoff Technik, Frank Höher, WITTMANN BATTENFELD and Lars Denk, Denk Kunststoff Technik, in front of the EcoPower 300

Fig. 2: EcoPower 300/1330 from WITTMANN BATTENFELD with automation from Denk Kunststoff Technik
Fig. 3: from the left: Frank Höher and Falk Denk in front of the VM R 110

Fig. 4: Connector for charging air pipe: the part itself is injection-molded, the O-ring, the retainer ring and the silver-colored spring circlip are subsequently fastened to it.
Fig. 5: Retainer ring containing the ball bearing for the front suspension struts: TPU on polyamide with a sheet metal insert

Fig. 6: left: Polyamide door check housing with TPU buffers and inserts; right: supporting arm for door check, insert-molded with polyamide
The WITTmann Group

The WITTmann Group is a worldwide leader in the manufacturing of injection molding machines, robots and peripheral equipment for the plastics industry. Headquartered in Vienna/Austria, the WITTmann Group consists of two main divisions, WITTmann Battenfeld and WITTmann, which operate 10 production facilities in 7 countries, including 30 direct subsidiary offices located in all major plastics markets around the world.

WITTmann Battenfeld focuses on the independent market growth in the manufacturing of state-of-the-art injection molding machines and process technology, providing a modern and comprehensive range of machinery in a modular design that meets the actual and future requirements of the plastic injection molding market.

WITTmann’s product range includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, mold temperature controllers and chillers. With this comprehensive range of peripheral equipment, WITTmann can provide plastics processors with solutions that cover all production requirements, ranging from autonomous work cells to integrated plant-wide systems.

The syndication of the WITTmann Group has led to connectivity between all product lines, providing the advantage plastics processors have been looking for in terms of a seamless integration of injection molding machines, automation and auxiliary equipment – all occurring at a progressive rate.

Fig. 7: Resonator made of highly reinforced aromatic polyamide, infrared-welded
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