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USER REPORT

Boryszew Oberflächentechnik Deutschland GmbH

Perfect surfaces with galvanized plastic parts

Its specialist knowledge in the area of galvanizing plastic parts makes Boryszew Oberflächentechnik Deutschland, based in Prenzlau/Germany, an important strategic partner for leading automobile manufacturers. In plastics injection molding, Boryszew has now been relying on injection molding technology from WITTMANN BATTENFELD for the last 10 years.

Today's Boryszew Oberflächentechnik Deutschland GmbH was established in Prenzlau as UBR at the end of 2005. In 2012 it was taken over by the Polish Boryszew group. Following a fire in April 2015, which destroyed most of its premises, the company has now moved into its new building in April this year.

Boryszew Oberflächentechnik Deutschland currently employs 348 workers and is planning to reach 34 million Euros in sales in 2017. The company's main market is Germany, its export markets are located in America and Asia. Boryszew Prenzlau realizes 90% of its sales with automotive parts for both interiors and exteriors of vehicles, such as decorative strips or door handles. The remaining 10% of sales are achieved with products for the sanitary installation and aviation industries. The company's customer base includes more or less all major German automobile manufacturers, its most important customer being the VW/Audi group.

Boryszew Oberflächentechnik's range of products and services includes the design and development of the parts, prototyping, series production and surface finish as well as the assembly of complex components. The company possesses specialist knowledge in the galvanization of injection-molded parts, for which materials are used whose galvanization presents a major challenge. One example is the use of ABS PC T65, which is hard to galvanize due to its high PC and low ABS content, since the butadiene contained in ABS is an important ingredient for galvanization. Other examples of materials hard to galvanize, which are processed by Boryszew Oberflächentechnik Deutschland, are fiberglass-reinforced PA6 GF30 and glass-ball reinforced PA6 GB50. Perfect interaction between the injection molding and

galvanization processes is the prerequisite for successful application of the surface finish to materials with these types of composition.

Since galvanized parts reveal even the most minute flaws on injection-molded parts, Boryszew's demands on the surface quality of the plastic parts are very stringent. Accordingly, the company has set high standards of precision and reliability for its injection molding machines. Lutz Suhrbier, the CEO of Boryszew Oberflächentechnik Deutschland, explains: "Our injection molding machines must above all be highly accurate in every cycle, so that the part surfaces meet the quality standards we need for subsequent galvanization." Uwe Matteit, responsible for plastics injection molding at Boryszew in Prenzlau, adds: "Reliability and repeatability of the parts are our most important considerations. But easy operation and low energy consumption of the machines are also important to us."

Boryszew Oberflächentechnik Deutschland is operating 25 injection molding machines with clamping forces ranging from 400 to 7,000 kN, 13 of which have come from WITTMANN BATTENFELD. The first machine was already delivered ten years ago, the first robot from WITTMANN three years later. Boryszew in Prenzlau also uses the AIRMOULD® internal gas pressure technology from WITTMANN BATTENFELD, since the weight of automotive components plays an important role. Variothermic technology from WITTMANN BATTENFELD is used for particularly sensitive surfaces.

The most recently supplied machines are three units from the all-electric *EcoPower* series, two with 1,100 kN and one with 1,800 kN clamping force, plus two servo-hydraulic *MacroPower* machines with 4,000 and 7,000 kN clamping force, equipped with WITTMANN robots, safety barriers and conveyor belts. The machines from the *MacroPower* series and one of the *EcoPower* models already come with the new UNILOG B8 control system running under Windows® 10 IoT, which, compared to its predecessor version, possesses several additional features and is even easier to operate. In addition to their high energy efficiency, the machines offer primarily the high standard of precision and repeatability required by Boryszew. With the *MacroPower* 700/3400 delivered in April this year, on which decorative strips are manufactured, a robot from WITTMANN's new pro series, a W843 pro, is used, which offers the special benefits of compactness, quiet running, operator friendliness and energy efficiency.

At Boryszew, Uwe Matteit is very satisfied with the most recently delivered machines. "These machines recommend themselves by their high standard of precision and easy handling", he says. Lutz Suhrbier also praises the excellent cooperation with WITTMANN BATTENFELD. "Fast, reliable and competent service is vital for us. Our business relations with WITTMANN BATTENFELD are characterized by mutual trust. If any problems occur, they are solved quickly, simply and expertly."



Fig. 1: The new building of Borszew Oberflächentechnik Deutschland in Prenzlau



Fig. 2: from the left: Lutz Suhrbier, CEO and Uwe Matteit, Department Manager Plastics Processing at Borszew Oberflächentechnik Deutschland, with WITTMANN BATTENFELD salesman Ottmar Brüggemann in front of the most recently delivered *MacroPower 700*



Fig. 3: *MacroPower 700/3400* with W843 pro robot



Fig. 4: Decorative strips manufactured with the *MacroPower 700*



Fig. 5: Uwe Matteit shows Ottmar Brüggemann a decorative strip which has been chrome-plated



Figs. 6a + b: Injection-molded, chrome-plated door handles embedded in a complex assembly

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 8 production facilities in 5 countries, including more than 33 direct subsidiary offices located in all major plastics markets around the world.

WITTMANN BATTENFELD focuses on 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.

Contact:

WITTMANN BATTENFELD GmbH & Co. KG

Werner-Battenfeld-Strasse 1

D-58540 Meinerzhagen

Tel.: +49 2354 72 – 0

Fax: +49 2354 72 – 485

info@wittmann-group.com

www.wittmann-group.com

Boryszew Oberflächentechnik Deutschland GmbH

Automeile 2a

D-17291 Prenzlau

Tel.: +49 3984 879659

Fax: +49 3984 719202

contact@akt-ag.de

www.akt-ag.de