Immediately Ready for Use

Wittmann Continues to See Itself Well Placed as a One-Stop Supplier

With its Industry 4.0 solution portfolio, the Wittmann Group is receiving a positive echo in the market. This virtually extends the injection-molding machine into a smart workcell. For the near future, the company is tooling up for the demands of a circular economy – and declining demand.

The Wittmann Group is currently occupied by two main issues: digitalization and sustainability. As a knowledgeable ambassador for networked production, Michael Wittmann, Managing Director of the company, has been out and about in the market for years. "With our solution package for Industry 4.0 technologies, we have our finger firmly on the pulse. For all the categories defined by VDMA – smart machine, smart production and smart services – we provide our own developments and technologies," Wittmann tells ***Kunststoffe*** – and goes into specifics: "They comprise different HiQ optimization packages for adapting the injection process to fluctuating ambient conditions, remote web machine service, condition monitoring and other intelligent functions."

Finger on the pulse with Industry 4.0 solutions: Michael Wittmann, Managing Director of the eponymous corporate group (© Wittmann)

The Smart Workcell

In addition, Wittmann has defined the "Smart Workcell" category for extending the injection molding machine with connected peripheral equipment. "We are the only company on the market to provide flexible horizontal data communication that is immediately ready for use and covers the specific requirements of the plastics industry. Our customers appreciate that," says Wittmann. The difficulty lies not in setting up communication interfaces, ideally Euromap Standards or at least OPC-UA communication protocols, in horizontal communication, but addressing the special requirements of plastics processing in detail.

As the Austrian injection molding system supplier interprets it, the solution is to allow mobile Wittmann 4.0 data servers, for example, temperature control equipment or machine-side dryers, to be taken to any Wittmann-Battenfeld machine with Wittmann 4.0 option as before, and automatically authenticate themselves with this machine. During this procedure, the corresponding communication protocol between the machine and ancillary equipment is selected and no longer accesses a physical ancillary unit, but a virtual model of the device that is currently plugged in.

Unbroken Data Communication and Automatic Parameter Setting

According to Wittmann, the advantage is that the user no longer needs to deal with IP addresses and manual assignment of equipment to machines, which of course is subject to errors. The user

Service

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can operate and configure a workcell in just the same way as was possible without Industry 4.0, but "with the advantage of unbroken data communication and automatic parameter setting on all devices," according to the managing director. "Wittmann 4.0 can also show users which devices are needed for which mold. Our motto is plug and produce without making complex settings and adjustments."

Wittmann is very satisfied with the way the company has developed since taking over the injection molding manufacturer Battenfeld in 2008. However, after years of growth (**Graph**), as in many other companies, there has been a reversal in the incoming orders trend since 2018 at the latest.

Injection molding machines are designed to be able to process sustainable materials: Wittmann Battenfeld Managing Director Rainer Weingraber

(© Wittmann Battenfeld)

Careful Management of the Entire Raw Materials Stream

Regarding the second complex of topics. a response is given by Rainer Weingraber, who succeeded Georg Tinschert as Managing Director of Wittmann Battenfeld GmbH. The machine-maker, based in Kottingbrunn, Austria, is a partner of the Blue Competence sustainability initiative of the VDMA and has already committed itself to think and act sustainably. According to Weingraber, "Sustainability is part of our corporate philosophy and strategy. This is mainly expressed in the fact that energy efficiency is our highest priority in the use of our machines and equipment, as well as in the development and ongoing optimization of all components."

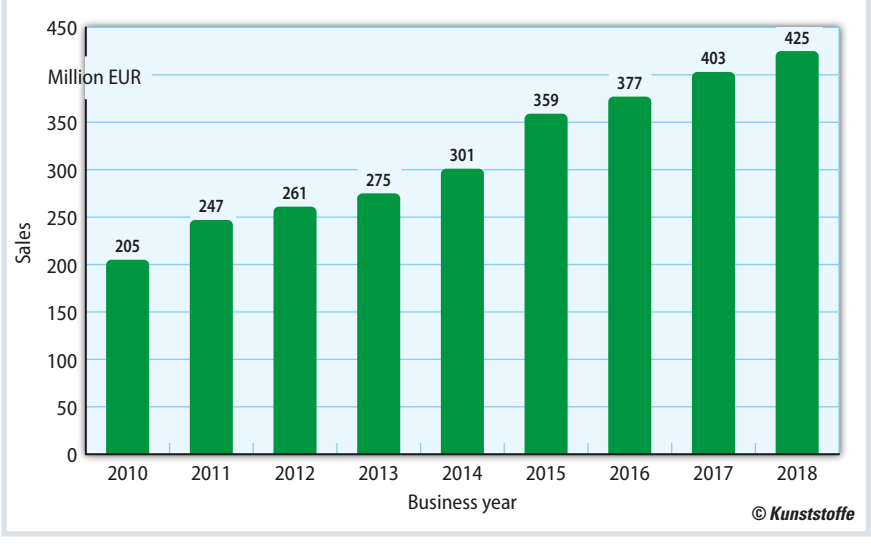
This not only involves highly efficient drive systems but also finding settings that reduce the process-relevant energy consumption, for example by utilizing the process heat in the production cell. "Moreover, we also promote sustainability by reducing material consumption, be it with reduced wall thicknesses or through process combinations. As a one-stop shop supplier, we also have full control over the material flow, from raw materials input to the finished product, and thereby also ensure careful management in the raw material stream," says Weingraber.

Wittmann Battenfeld also attaches importance to sustainability in its own production, and, for example, generates hot water through heat recovery from compressors, cleans components in an environmentally compatible way and monitors the treatment of the media it uses while observing all regulations. In addition, with ongoing mold optimizations and the use of new manufacturing technologies in the field of machining, it pursues the goal of shortening manufacturing times and saving energy.

Processing Biogenic Raw Materials

And what is Wittmann Battenfeld's attitude to the principle of the circular economy? Weingraber says, "'With process-engineering developments, but also – in cooperation with material manufacturers – by developing plastication units, a machine manufacturer can find ways of enabling the processing of new materials that do not consist of traditional plastic, but meet requirements for recyclability and sustainability. In the interests of a circular economy, the materials can either be easily reused or disposed of without residues, for example, parts made from non petroleum-based materials, such as natural fibers, natural greases or bran. We must design injection molding machines accordingly." The visitors to the K show can expect a corresponding exhibit, processing a material based purely on biogenic and mineral raw materials. ■

Dr. Clemens Doriat, Editor



Business in robots and ancillary equipment tends to figure somewhat stronger in the Wittmann Group's sales than the injection molding machine business (source: Wittmann)