

Media release

Fakuma 2017:

Overcoming the complexities of injection molding – with Kistler at Fakuma 2017

Winterthur, 5 September 2017 – At the 25th Fakuma 2017 from 17 to 21 October in Friedrichshafen (Germany), the Kistler Group will demonstrate the new functionalities of ComoNeo for injection moulding. Thanks to the latest software update, Kistler's process monitoring and control system now has the ability to optimize multi-component and RTM processes.

Let's begin with a look back in time: two years ago in this very same place – at the 2015 Fakuma – Kistler unveiled the first version of its ComoNeo process monitoring system. Ever since then, injection molders have benefited from a convenient solution for monitoring and optimizing their processes. With cavity pressure measurement as the basis, this system makes process optimization more efficient over the long term – and it brings substantial reductions in scrap rates.

With the help of intelligent tools such as online quality prediction and an integrated assistant, ComoNeo is now a reliable source of quality assurance support for users with widely differing levels of know-how. Processors are increasingly confronted with new and complex challenges. Requirements are becoming stricter as more and more functions are integrated into component design. The result: multi-component systems with highly complex process technology. For instance, the RTM (Resin Transfer Molding) method for industrial processing of long-fiber composites is becoming more widespread in lightweight construction design, especially in the automobile manufacturing and aviation technology sectors. At Fakuma 2017, Kistler will be showcasing new functions in ComoNeo that can handle processes of this sort.

2K and RTM process monitoring

Automobile production is just one of the industrial sectors where many plastic parts are actually combinations of two or more components. This creates the need to optimize and monitor mold and process technology. Evaluation of the characteristic cavity pressure curves poses a particular challenge: two or more processes have to be captured and evaluated separately, depending on the component being produced. But now, thanks to the expanded functionality of ComoNeo's new Version 2.1, it's possible to monitor as many as four components with different mold technologies.

The RTM process presents a challenge of a different kind: the curing process for the resins used may proceed very quickly, but it can also continue for many hours – it all depends on the material, the pressure and the temperature. To overcome this problem, the Kistler Group offers special RTM sensors. In conjunction with the expanded ComoNeo functionalities, they pave the way for excellent quality assurance and process optimization. Dr. Robert Vaculik, Head of Kistler's Strategic Business Field Plastics, explains: 'The software update for ComoNeo 2.1 now positions us to offer our customers a tried-and-tested system that covers a far wider bandwidth of applications. This is the efficient way to overcome the increased complexity of plastics processing – leading to higher quality and lower production costs.'

ComoDataCenter: all set for Industry 4.0

Among many other benefits, ComoNeo's intelligent functions meet the requirements for digitization of the injection molding process. Parameters captured by sensors integrated in the mold deliver transparent, reproducible results and integral process analysis. All the collected data is stored

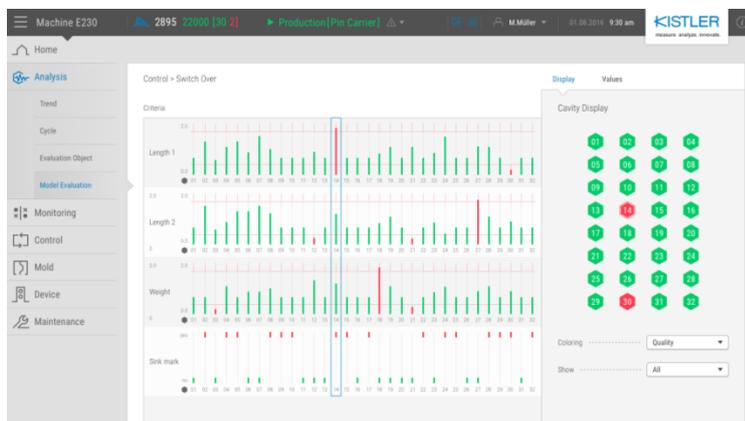
centrally in ComoDataCenter, where it is available for further analyses. The system also provides central storage of mold configurations which it can transmit to other plants. ComoDataCenter allows visualization and comprehensive analysis of process data – but that's not all. The data can also be networked with higher-level systems such as a Manufacturing Execution System (MES), equipped with cutting-edge communication interfaces like the OPC-UA.

In summer 2017, the Kistler Group acquired IOS GmbH of Aachen, Germany, a successful provider of MES systems – a move that marks a further consolidation of the Group's market position as an integral solution provider, augmenting its stock of Industry 4.0 expertise. This step brings Kistler even closer to its objective: to offer the plastics industry an end-to-end system solution (sensor to ERP) for quality monitoring and process optimization from one single source. The ultimate goals: maximum cost-efficiency and transparency of production in the era of Industry 4.0.

Kistler at the Fakuma 2017 in Friedrichshafen (17-21 October): Hall A3, Stand 3104
IOS at the Fakuma 2017 in Friedrichshafen (17-21 October): Hall A1, Stand 1505



Illustration 1



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Illustration 2



Illustration 3

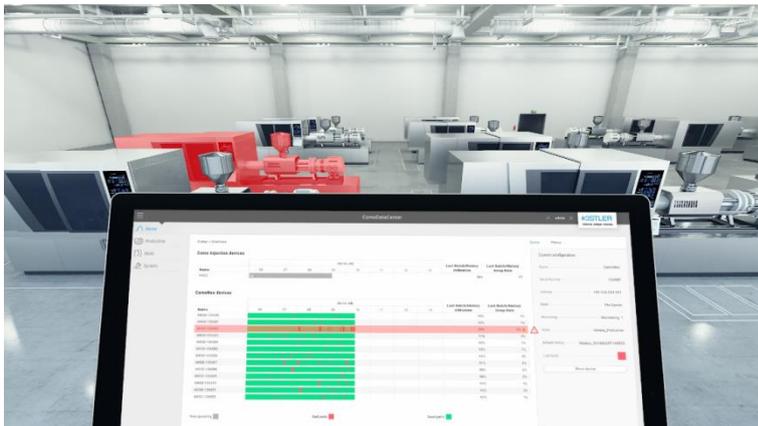


Illustration 4



Illustration 5

Captions

Illustration 1: The pressure curve is a key factor in process and production optimization and monitoring. Our process monitoring system helps visualize and evaluate this parameter.

Illustration 2: **Online quality prediction:** high-end process monitoring – ComoNeo directly predicts the component characteristics and evaluates quality on the basis of measurement values from the process sequence.

Illustration 3: Kistler's sensors and systems play a pivotal part in quality assurance and process optimization.

Illustration 4: ComoDataCenter is used to manage and analyze data for injection molding processes, and it allows networking of all ComoNeo and CoMo Injection systems.

Figure 5: Thanks to process monitoring with sensor technology specially designed for the RTM process, users can identify defects during production so as to avoid further processing of faulty parts.

About the Kistler Group

Kistler, the originator of piezoelectric measuring technology, is the global leader in dynamic pressure, force, torque and acceleration measurement. Cutting-edge technologies provide the basis for Kistler's modular systems and services.

Customers in industry, research and development benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure sustainable competitive edge. This owner-managed Swiss corporation plays a key part in the evolution of automobile production and industrial automation, and its innovative sensor technology also helps foster the development of many newly emerging sectors. Drawing on our extensive application expertise, and always with an absolute commitment to quality, Kistler drives innovations ahead in lightweight construction, vehicle safety, emission reduction and Industry 4.0.

Over 1,600 employees at 58 facilities across the globe are dedicated to the development of new measurement solutions, and they offer individual application-specific support at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2016, it posted sales of CHF 358 million. About 10% of this figure is reinvested in innovation and research – with the aim of delivering better results for every customer.

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