

D²= Decarbonization powered by Digitalization

- Digital offensive for CO₂ reduction with simultaneous decrease in energy consumption
- liveCare added to the socialProduction product family: continuous status monitoring of machine components
- Increasing energy consumption as a consequence of wear
- Live at K 2022: socialProduction on PX200, GX1100, powerMolding1300 and precisionMolding160

Munich, October 19, 2022). Decarbonization powered by Digitalization. KraussMaffei is using the slogan D² to highlight its featured topics at this year's K. Visitors to the booth (Hall 15/C24-D24) can see how digitalization helps to decrease the CO₂ footprint in plastics processing while simultaneously making processes more cost-efficient. The socialProduction product family makes a critical contribution to this and has gained a new member in the form of liveCare.

When is the best time to replace a screw? In many cases, fixed maintenance intervals are used in industry. This can result in units that are still usable being swapped out. In other cases, the screw remains in use until noticeable process fluctuations occur. It would make the most sense to swap it out at precisely the point in time where the benefit of the replacement exceeds the costs. With liveCare, you now have the ability to do just that. Before a plasticizing screw is no longer functional, it can have a significant effect on the cycle time and energy consumption. The resulting expenses must be taken into account when considering the optimum time to swap out the screw.

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liveCare, the youngest member of the socialProduction product family, calculates the amount of wear on critical machine components from values delivered by the standard sensors of the machine.

With the status monitoring feature, liveCare supplements the other modules of the socialProduction product family, productionMonitor and processSupport. This product family links the advantages of social media with cutting-edge production monitoring technologies by allowing machines and machine operators to communicate in a secure chat room.

productionMonitor enables a quick overview of the machine pool including key figures such as productivity, job progress and remaining run time. If an alarm occurs or a parameter is changed, the machine automatically sends a message to the chat, creating a digital shift log that documents important events beyond the shift change. processSupport monitors the manufacturing process with a self-directed learning method based on an intelligent algorithm and KraussMaffei's process knowledge. It enables anomalies to be detected immediately.

Optimizing the production process offers major leverage for CO₂ reduction—which, in turn, increases cost-efficiency, because the initial investment in a new injection molding machine makes up only about 10 to 20 percent of the lifecycle costs. Actual operation accounts for the rest. This means that if expenses for energy, maintenance etc. can be reduced, this is good not only for the environment, but also the bottom line. The same applies to the material processed.

In addition to socialProduction, the trade show booth will also feature a group of exhibits to highlight the topic of circular economy. Caps for insulin pens are produced from medical-grade PP on an all-electric PX 200, shredded, and compounded on a twin-screw extruder with 30 percent glass fibers to create a new material and processed into automotive door modules in a powerMolding 1300. The use of recycled material is increasingly requested by customers and will also be increasingly demanded by government authorities going forward. Here is where another digital product from KraussMaffei shows its strengths. APCplus keeps the shot volume

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uniform when increasing the amount of recycled material and regulates the changeover point and holding pressure level for each cycle. As a result of batch fluctuations or changing ambient conditions (temperature, humidity etc.), the melt viscosity can change and lead to deviations in component weight. When the machine is starting up, APCplus likewise ensures that good parts can be produced significantly faster, resulting in significantly less unnecessary plastic waste (post-industrial waste).

KraussMaffei's Digital & Service Solutions (DSS) business unit develops products for digital transformation of plastics processing as well as other applications. Visitors to K 2022 can see these for themselves live at Booth C15/C24-D24.

1_KM_DSS_2022_10_19_D2 Decarbonization powered by Digitalization.jpg

Caption: Continuous online monitoring with liveCare for condition-oriented, proactive maintenance strategies

Photos: KraussMaffei

Enclosure: Pictures and more information can be found at

www.kraussmaffei.com

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KraussMaffei – Pioneering Plastics

KraussMaffei is among the world's leading manufacturers of machinery and systems for the production and processing of plastics and rubber. Our brand stands for cutting-edge technologies – for more than 180 years. Our range of services covers all areas of injection molding machinery, extrusion technology and reaction process machinery. This gives KraussMaffei a unique selling point in the industry. With the high innovative power of our standardized and individual product, process, digital and service solutions, we can guarantee customers sustained additional value over the entire value-adding chain. Our range of products and services allow us to serve customers in many sectors including the automotive, packaging, medical and construction industries, as well as manufacturers of electrical and electronic products and household appliances. KraussMaffei employs around 4.700 people all over the world. With more than 30 subsidiaries and over 10 production plants, as well as about 570 commercial and service partners, we are represented internationally close to our customers. Since its foundation in 1838, the company's headquarters have been in Munich.

In April 2016, the Chinese state-owned company China National Chemical Corp. Ltd. ("ChemChina"), one of the leading chemical companies in China, became the majority shareholder of KraussMaffei Group. At the end of 2018, ChemChina listed the KraussMaffei Group as KraussMaffei Company Ltd. in Shanghai. The listing opened up access to the Chinese capital market and local investors.

For more information: www.kraussmaffei.com

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