

KraussMaffei wins the AVK Innovation Award for Composites 2023

- First place in the Processes & Methods category
- New CFP technology for chopped fiber processing in the injection molding machine distinguished with award
- Material savings of up to 46 percent possible
- Partner project with Wirthwein SE

(Parsdorf, Germany, November 10, 2023). Together with Wirthwein SE, KraussMaffei has won first place in this year's AVK (German Federation of Reinforced Plastics) Innovation Award for fiber-reinforced composites in the Processes & Methods category. The award was given to the newly developed CFP (Chopped Fiber Processing) technology. The new technology for direct compounding of chopped fiber in the injection molding machine yields significant material and energy savings.

With this new CFP technology, KraussMaffei is simplifying the production of chopped fiber-reinforced plastic components substantially. Compared to conventional continuous-fiber-reinforced technologies, CFP provides significant savings in terms of material and energy costs. Depending on the component, up to 46 percent of material costs and approximately 0.8 kWh per kilogram of processed material can be saved. Transport and storage costs are also reduced. The investment costs for precompounding are unnecessary. In particular, the reduction in energy consumption during processing and the reduced transport routes lead to a significant reduction in the CO₂ footprint.

For the greatest possible cost-saving effect, particularly large shot weights are preferred, i.e. large-volume PP-GF components. Conceivable applications are for example in the automotive industry in the interior and in

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the engine compartment, for example for door modules, front ends, dashboard panels, fan frames or engine covers, as well as in other industries such as technical parts as well as packaging and logistics. Another advantage of the new CFP technology: Recycled materials can also be processed safely.

Patented screw for easy retrofitting

The heart of the new CFP technology is a screw specially developed and patented by KraussMaffei that ensures a high degree of blending of fibers and polymer matrix and prevents fiber clusters. The patented screw can be retrofitted without any problems. The fibers are metered directly into the plasticizing unit together with the polymer granulate and additives. Thus, precompounding is no longer necessary. CFP thus makes it possible to manufacture premium quality products.

The new CFP technology now makes it possible to manufacture fiber-reinforced components from chopped fiber with the same component properties as those from continuous fiber processing methods. This is associated with a significant reduction in machine, material and energy costs. "Thus the new process has the potential to replace the use of more expensive processes for continuous fiber processing in many cases," explains Felix Weitmeier, Process Engineering Team Leader at KraussMaffei.

The options to create its own recipes optimized for the respective application makes it possible for Wirthwein to produce customized products for its customers. "This minimizes overengineering of the materials and thus cuts costs and CO₂ emissions, boosting competitiveness significantly," adds Jan Wiedemann, Head of Innovation and Materials at Wirthwein, explaining the benefits of the new CFP technology.

Renowned AVK Innovation Award

The renowned Innovation Award for fiber composite plastics of the AVK-Industrievereinigung Verstärkte Kunststoffe, a German plastics industry interest group, is given each year in three categories for outstanding

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composites innovations. An expert jury composed of engineers, scientists and industry journalists evaluates the submissions based on criteria such as level of innovation, degree of implementation and sustainability.

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1st place in the Processes & Methods category:

At the JEC DACH Forum in Salzburg, AVK jury heads Gerhard Lettl, C.F. Maier GmbH (left) and Prof. Jens Ridzewski, IMA Materialforschung und Anwendungstechnik GmbH (right), presented the AVK Innovation Award 2023 for the new CFP technology to Felix Weitmeier and Lazlo Giesgen KraussMaffei

Photo: AVK/JEC

You can obtain further information and photos in print quality at:

www.kraussmaffei.com

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KraussMaffei – Pioneering Plastics

KraussMaffei is one of the world's leading manufacturers of machinery and systems for producing and processing plastics and rubber. Our brand has been synonymous with cutting-edge technology for over 185 years. Our product range includes all technologies in injection molding, extrusion and reaction process machinery. In 2022, we expanded our portfolio to include additive manufacturing. With this broad spectrum of technologies, KraussMaffei has a unique selling proposition in the industry. By drawing on our proven innovative capacity, we can guarantee our customers sustained additional value over their entire value-adding chain through our

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standardized and individual product, process, digital and service solutions. The range of our products and services allows us to serve customers in many sectors including the automotive, packaging, medical and construction industries. We also supply manufacturers of electrical and electronic products and household appliances. KraussMaffei employs about 4,700 people worldwide. KraussMaffei is represented internationally in proximity to our customers with more than 30 subsidiaries and over 10 production plants, as well as about 570 commercial and service partners. The company was founded in Munich in 1838.

In April 2016, China National Chemical Corporation Ltd. ("ChemChina") became the main shareholder of the KraussMaffei Group. In December 2018, ChemChina listed the KraussMaffei Group on the Shanghai stock exchange as KraussMaffei Company Limited. The listing opened access to the Chinese capital market and local investors. Today, ChemChina is part of Sinochem Holdings Corporation Ltd., one of the world's leading chemical groups with over 220,000 employees.

Further information at: www.kraussmaffei.com

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