

The diversity of composites solutions from KraussMaffei

- KraussMaffei presents innovative solutions in the field of lightweight construction and surfaces at JEC WORLD in Paris
- Comprehensive technology portfolio: FiberForm, NFPP, RTM, wetmolding, LFI, SCS, ColorForm, pultrusion, filament winding, battery encapsulation and additive manufacturing

(Parsdorf, Germany, February 14, 2024) Complex fiber composite / lightweight components and the future of their manufacturing processes: KraussMaffei will be presenting a wide range of exhibits from the various composites technologies at the JEC trade fair (05.-07.03.2024 in Paris, booth 5-N130).

KraussMaffei offers its customers comprehensive expertise in designing and implementing complete production lines for plastic components - from planning to series production. At the JEC booth, visitors can discover the latest trends and innovative solutions in the following sectors:

- Automotive industry, including electric vehicles
- Commercial and agricultural vehicles
- Aerospace, including Advanced Air Mobility
- Building and construction
- Renewable energies
- Recycling

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The presentation at JEC, the showcase of the composites industry, illustrates the wide variety of applicable processes and shows where exciting further developments are taking place.

In recent years, KraussMaffei has developed numerous technologies for the **automotive industry** and successfully brought them to series production readiness on the market. The focus here is on lightweight and structural components such as a carbon rim, a leaf spring and a battery enclosure for EV vehicles, which are manufactured using the high-pressure RTM process, as well as on design components such as a unique interior trim with backlighting and a self-healing surface, which are manufactured using the ColorForm process. With its new BatteryEncapsulation technology, KraussMaffei is also positioning itself as a leading solution provider for protecting battery cells with highly reactive and flame-retardant polyurethane.

In the area of **commercial and agricultural vehicles**, the focus is on largescale interior and exterior trim parts. At the JEC, the cladding of a tractor hood will be on display, which is produced using the LFI **process** (long fiber injection). This technology offers the advantages that it is particularly economical for small quantities compared to SMC and can be combined directly with numerous surface technologies such as thermoformed films, inmold painting or artificial leather films.

In the **aerospace** sector, **including urban air mobility**, KraussMaffei is working with its partner, the National Institute for Aviation Research (NIAR) at Wichita State University in the USA, and its Advanced Technologies Lab for Aerospace Systems (ATLAST) to further develop its automated and highly productive thermoplastic and thermoset fiber composite technologies in order to meet the extreme requirements in terms of weight, material selection and process stability.

The **construction industry** thinks in decades: this is how long corrosionresistant profiles and concrete reinforcements must reliably fulfill their function. With the pultrusion process, i.e. fiber-reinforced extrusion, corresponding components can be produced efficiently and reliably. At the JEC stand, visitors can view profiles for windows and other applications as well as reinforcing rods.

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Pultruded profiles on which solar panels can be mounted are ideal for the megatopic of **renewable energies**. They come from KraussMaffei's UK subsidiary Pultrex, as do the rotor blade belts used to reinforce the rotor blades of large wind turbines. They have to withstand enormous loads and at the same time be as light as possible.

KraussMaffei is breaking new ground in **recycling** with its three partners RAMPF, REMONDIS and BASF and is driving forward the recycling of polyurethane (PUR). Insulating materials from refrigerators are returned to the material cycle on an industrial scale and converted into high-quality recycled polyol by means of chemical processing. Visitors to the trade fair can also find out more about this.

KraussMaffei offers comprehensive system solutions for reaction process machinery, ranging from individual metering machines to complete system concepts, including post-processing, automation and testing.

KraussMaffei not only develops pioneering technologies, but also manufactures molds for various processing techniques - from fiber composite molds to the backfoaming of molded parts. These customized molds are specially adapted to the respective application and ensure optimum processes.

The composites industry also has considerable potential in the field of additive manufacturing. Cost-effective, fast and uncomplicated 3D printing can also be used to produce large-format tools and customer-specific components.

The experts from KraussMaffei will be available at the JEC to provide detailed information about the many possibilities of additive manufacturing. Regardless of the technology used, it is important to find the solution that best suits the customer's requirements, from the concept phase to the completion of the component.

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Photos:

1_KM_RPM_20240214_JEC Suitable production processes for growth markets 2_KM_RPM_20240214_JEC We accompany you from the idea to series production 3_KM_RPM_20240214_JEC powerPrint - granulate-based large-format 3D printer for efficient printing processes for a variety of materials and build strategies

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KraussMaffei - Pioneering Plastics

KraussMaffei is one of the world's leading manufacturers of machines and systems for the production and processing of plastics and rubber. Our brand has been synonymous with cutting-edge technology for more than 185 years. Our range of products and services covers 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 point in the industry. With a high level of innovation, we ensure sustainable added value for our customers across their entire value chain with standardized and individual product, process, digital and service solutions. With our range of services, we serve customers from 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 worldwide. With more than 30 subsidiaries and over 10 production sites as well as around 570 sales and service partners, KraussMaffei is represented close to its international customers. The company was founded in Munich in 1838.

In April 2016, China National Chemical Corporation Ltd ("ChemChina") became the majority shareholder of the KraussMaffei Group. In December 2018, ChemChina listed the KraussMaffei Group as KraussMaffei Company Limited in Shanghai. The

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listing opened up 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: www.kraussmaffei.com

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