

Stylish, safe and sustainably produced: KraussMaffei and partners present revolutionary children's bicycle at Fakuma

- Frame and fork made of a high-performance polymer with recycled carbon fibers
- 67 percent lower CO₂ emissions
- Made in Germany by Weber Fibertech on a MX 1600
- Zero scrap thanks to new mass back-pressure method in the WIT-process

(Parsdorf, August 30th, 2023) The new Lion Bike by Marcel Kittel and Tony Martin, both former professional cyclists, stands for an extraordinary bike series that makes kids even more visible on their bikes and ensures more sustainability in manufacturing. The frame and fork are made of a high-performance polymer with recycled carbon fibers. They are produced by specialist Weber Fibertech on an MX 1600 from KraussMaffei. The prototype of the new Lion Bikes can be seen live at the KraussMaffei booth at Fakuma (Friedrichshafen, October 17 – 21, Hall A7, Booth 7303).

The new Lion bikes stand for more visibility and thus safety for children in road traffic. They have a special paint that makes the frame glow. The unusually large lighting system with daytime running lights that is completely integrated into the frame enhances the visibility of the bikes. The frame and fork are made of the high-performance polymer polyamide 6 with 40 percent recycled carbon fibers – a groundbreaking new and resource-saving material mix in the bicycle industry. Thanks to these durable and 100% recyclable materials, the main components can be produced using a state-of-the-art injection molding process. Benefits for kids: a clean look with no welded seams at all, a stylish design and, most importantly, a mini-CO₂ footprint.

KraussMaffei Technologies GmbH
Corporate Communications &
Marketing
Krauss-Maffei-Straße 1
85599 Parsdorf/Germany

Phone +49 (0) 89 8899 2334
www.kraussmaffei.com

The frame and fork are being manufactured by specialist Weber Fibertech, on an MX 1600 from KraussMaffei, which is to be delivered this November. The first finished Lion Bikes will then be available on the market from spring 2024, in time for Easter. To ensure that all this can be done in terms of quality and on-time delivery, Weber Fibertech is relying on the many years of experience and expertise of KraussMaffei. Friedbert Schmitt, CEO of Weber Fibertech: "The technical performance of the MX series has won us over, and there's no turning back. In particular, we were impressed by how, with a screw diameter of 120 mm, injection was carried out at 300 mm/s, thus achieving a large volume with rapid mold filling."

More ease and zero scrap thanks to WIT process

To ensure that the frame and fork are stable and at the same time require less material, Weber Fibertech uses the KraussMaffei MX 1600 in combination with the WIT process. So-called water injection molding is ideal for producing such functionally complex, highly integrated plastic components with hollow body construction. The appropriate machine and technology come from PME fluidtec, specialist with more than 100 successful WIT processes on the market.

The special feature here is that PME is using the mass back-pressure method in the WIT process for bicycle frames for the first time. The melt displaced by the water is pressed back into the plasticizing unit and reused in the next shot for the frame or fork. This means that there is no waste during production, which in turn saves material during production and is beneficial for the carbon footprint.

67 percent lower CO₂-footprint

Going one step further and comparing the production of Lion Bikes with conventional aluminum frames and forks, CO₂ emissions are 67 percent lower for each bike produced. Since the components are now made in Germany, this also shortens the supply chains and transport routes. Another important contribution to sustainability efforts.

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Lion Bike live at the KraussMaffei booth at Fakuma

Visitors can experience live at the KraussMaffei booth at Fakuma how more safety, cool design and sustainable production are revolutionizing the bicycle industry (Friedrichshafen, October 17 - 21, Hall A7, Booth 7303). Together with partner Weber Fibertech and PME, KraussMaffei is showing the prototype of the new Lion Bikes. Says Friedbert Schmitt: "With the processing of high-performance polymers and recycled carbon fibers and the production made in Germany, we are sending an important signal in the direction of sustainability in the bicycle industry."

01_KM_2023_08_IMM_Lion Bike.jpg

Cool and sustainable: The new Lion Bikes for kids with frame and fork made of high-performance polymers and recycled carbon fibers

Photo: kids bike revolution GmbH

02_KM_2023_08_IMM_Lion Bike Kids.jpg

Off to new adventures: The new Lion Bikes provide more visibility and thus safety for the kids

Photo: kids bike revolution GmbH

03_KM_2023_08_IMM MX 1600.jpg

A guarantee for a high injection volume: The MX series from KraussMaffei

Photo: KraussMaffei

Enclosure: Pictures and more information can be found at

www.kraussmaffei.com

Press contact:

Petra Rehmet

Content & Campaign Manager / Press Officer Injection Molding Machinery

Phone: +49 (0) 89 8899 2334

Email: Petra.Rehmet@kraussmaffei.com

KraussMaffei Technologies GmbH
Corporate Communications &
Marketing
Krauss-Maffei-Straße 1
85599 Parsdorf/Germany

Phone +49 (0) 89 8899 2334
www.kraussmaffei.com

Uli Pecher
Head of Corporate Communications
Telefon: +49 (0) 89 8899 1080
Email: Uli.Pecher@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 185 years. Our range of services covers all areas of injection molding machinery, extrusion technology and reaction process machinery. In 2022 we added additive manufacturing to our portfolio. This broad range of technologies 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. The company was founded in 1838 in Munich.

In April 2016, China National Chemical Corporation Ltd. (“ChemChina”) became the majority shareholder of KraussMaffei Group. In December 2018, ChemChina listed the KraussMaffei Group as KraussMaffei Company Limited in Shanghai. The listing opened up access to the Chinese capital market and local investors. Now ChemChina is part of Sinochem Holdings Corporation Ltd., one of the world's leading chemical conglomerates with over 220,000 employees.

For more information: www.kraussmaffei.com

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