

## Press release

# Handmade bicycle frames sustainably produced thanks to powder coating

*Bielefeld, January 2022: For the employees of Krüger Fahrrad- und Fahrradrahmenbau from Spengewallenbrück in North Rhine-Westphalia, building two-wheelers is more than just a job - it's a passion. That's why the company is committed to continuously improving the quality of its products. With the help of the surface specialists at Oltrogge GmbH & Co. KG from Bielefeld, Krüger optimizes its internal processes and at the same time increases the sustainability of its production.*

The bicycle is more popular than ever. With a sales increase of up to 900 million euros in the Corona year 2020, the bicycle industry was considered the big non-food winner of the pandemic. This was the result of a study by the IFH Cologne trade research institute and BBE Handelsberatung. This development is also felt by the company Krüger Fahrrad- und Fahrradrahmenbau from Spengewallenbrück in North Rhine-Westphalia. "Our work has always been valued. Since the Corona pandemic, however, we have experienced a significantly higher customer demand," says Managing Director Michael Krüger.

In 1967, his father Dieter Krüger founded the company as a supplier for the East Westphalian two-wheeler industry. The company grew quickly and specialized in the field of bicycle frame construction. After moving from Bielefeld to the current location, the production of complete bicycles was also started. Since 2008, the family business has been managed by Michael Krüger in the second generation. "A bicycle consists of thousands of individual parts," he describes his work. "Making a bicycle from these individual parts is much more than just a job for us. It's a passion!"

### **ENVIRONMENTALLY FRIENDLY SUPPLEMENT TO LIQUID COATING**

Because of this very passion for two-wheeled vehicles, Krüger is always on the lookout for the optimal solution for building the bicycle frame, which determines the character of the bicycle in terms of appearance and geometry. "The frame is the most important part of the bicycle: it has the function of a spine and holds everything together," explains Michael Krüger.

To give the frame that special "something," a few steps are necessary: After a primer as rust protection, an adhesion primer is applied for the color shade. Depending on the customer's requirements, Krüger has previously used liquid paint or powder at this point. Acrylic paint is then applied in the desired color shade. Finally, a clear coat of polyester powder is applied to protect the color and frame, and the final curing of all layers takes place in a chamber oven. "In the long term, we wanted a more sustainable way to paint our frames," explains the managing director. Together with Oltrogge from Bielefeld, engineering partner in the fields of compressed air and surface technology as well as machine tools, a way was sought to make the painting process more effective and environmentally friendly. In the end, Krüger Fahrrad- und Fahrradrahmenbau decided on a new

system for more effective and sustainable powder coating, especially for the application of the primer and the final clear coat.

## **RESOURCE-SAVING, COST-SAVING AND AT THE SAME TIME SCRATCH AND IMPACT RESISTANT**

Powder coating is a process in which paint particles are applied electrostatically to the electrically conductive bicycle frame to be coated by means of a spray gun. Krüger now uses a new WAGNER SPRINT manual system for coating, which is particularly suitable for small batch sizes and frequent color changes. The particles adhere to the frame due to the electrostatic charge. The paint is then cured into the frame in an oven or dryer.

Krüger benefits from the numerous advantages of the process: Compared to liquid painting, powder coating is solvent- and emission-free and therefore environmentally friendly, and also extremely resource-efficient. Powder that is not needed can be collected and reused for the next coating process. This effectively saves costs at Krüger. In addition, powder-coated frames and components are characterized by optimum protection against weathering and corrosion, and are highly resistant to scratching and impact. Managing Director Michael Krüger is enthusiastic about the advice and the solution that Oltrogge provided: "With the new powder coating facility, we can offer bicycle frames that are sustainable and at the same time even more robust. Anyone who rides one of our mountain bikes through the mountains no longer has to worry about their paint getting scratched by small stones or the paint harming the environment."

## Pictures

Pictures: © Oltrogge



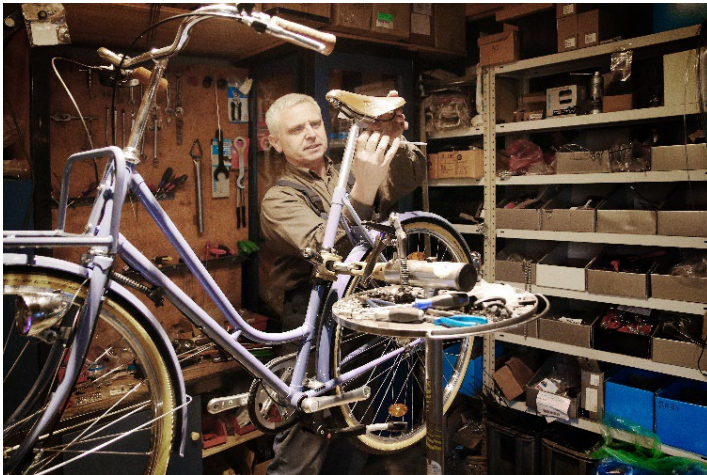
Krüger Fahrrad- und Fahrradrahmenbau was founded in 1967 by the father of the company's CEO Michael Krüger, shown here soldering a socket connection, as a supplier company for the East Westphalian bicycle industry. Today, the company specializes in the field of bicycle frame construction.



Krüger has opted for a new powder coating system. A manual system is used for this, which is particularly suitable for small batch sizes and frequent color changes. Among others, the PEM-X1 manual gun is used. (Picture source: J. Wagner GmbH)



The particles adhere to the frame during powder coating due to the electrostatic charge. The paint is then cured into the bicycle frame in an oven or dryer.



Krüger benefits from the advantages of powder coating: Compared to liquid painting, it is environmentally friendly, conserves resources and saves costs. In addition, powder-coated frames and components are characterized by optimum protection against weathering and corrosion and are highly resistant to scratching and impact.

## About Oltrogge GmbH & Co. KG

Founded in 1866, Oltrogge GmbH & Co. KG develops efficiency-enhancing solutions for existing or new production routes in industry. The Bielefeld-based company, which is managed by Daniel Oltrogge and Marcus Scheiber, makes production processes safe and reliable. As an engineering partner for technically sophisticated industrial solutions, Oltrogge takes care of the optimization of existing plants and the design of new production routes with holistic service. With four locations nationwide, in Bielefeld, Aichach, Altenburg and Mülheim a. d. Ruhr, and expertise from over 150 years in the fields of surface and compressed air technology as well as machine tools, Oltrogge supports its partners directly on site and thus promotes sustainable production success. With 150 employees, the medium-sized company generates annual sales of 30 million euros (2019) and advises around 15,000 industrial customers from various sectors worldwide.

You can find more information here:

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