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SCHMIEDEBERGER GIESSEREI: BOOSTING EFFICIENCY THROUGH **AUTOMATED GRINDING PROCESSES**

A practical report on technological advancements on-site – using Reichmann's Maus machines as an example

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In the deburring department of Schmiedeberger Gießerei GmbH, located in the Erzgebirge region of Germany, state-of-the-art grinding and deburring machines from Reichmann are delivering noticeable efficiency gains. The introduction of the Maus 600 and 900 has significantly reduced the cleaning time per component – from around five minutes down to just about one and a half.

The investment pays off quickly, especially for batch sizes of 1,000 parts or more, and in cases of complex contours or recurring series. However, even smaller batches benefit from notable economic advantages, as confirmed by the company's management. Throughput has increased by a factor of three to four, while personnel requirements have decreased and quality has improved. Complaints

due to grinding errors are now a thing of the past.

Technological Advancements

The implementation of the Maus 600 and 900 took place in phases. One key advantage lies in CAD-based offline programming, which enables fast changeovers and efficient planning – particularly useful for small production series. Additional features such as clamping systems with downward pressure enhance flexibility when handling workpieces of varying shapes. Compared to robots, the CNC machines often offer shorter cycle times and quicker ramp-up phases, especially for new parts.

In-house Expertise and Tailor-made Fixtures Thanks to its in-house tooling capabilities, Schmiedeberger Gießerei can produce required fixtures quickly and accurately. This not only saves time and costs but also ensures repeat accuracy and fast response to new demands. Smaller batches are still processed manually – but how did the transition to automated processes work in practice?

An Operator's Perspective – Toni Vogler Shares His Experience

"With experts like Toni Vogler from the cleaning department, hands-on technical know-how directly contributes to machine optimization."

Toni Vogler knows the ins and outs of the cleaning shop like few others. For years, he manually deburred and ground cast parts – and to this day, the bench grinder remains a trusted companion. But for the past three years, he has also been working with the automated "Mice" from Reichmann - and with growing enthusiasm.



"It wasn't love at first sight," the Erzgebirge native admits openly. When his supervisors, Holger Kappelt and Dr. Falko Uyma, tasked him with introducing automated deburring, he was initially hesitant. But with hands-on experience, a bit of trial and error, and his deep understanding of the cleaning process, Toni quickly became a valuable contributor to the machine programming.

True to his motto, "How can I do this without having to turn the part 500 times?", he started with the Maus 600 and later moved on to the larger 900. Today, he smiles and says: "We're pretty much inseparable now."

A special role is played by the integrated self-optimization software Maus CAAT. It automates many steps for the

Self-Optimization Software: Maus CAAT

operator, quickly adapts to the required processes, and delivers highly precise results.

opens up entirely new dimensions in process optimization that would be extremely time-consuming – if not altogether unfeasible – without software support. As a result, Maus CAAT saves valuable time and significantly boosts productivity.

At Schmiedeberger, the Maus 600 is primarily used for smaller castings up to 25 kilograms, while the Maus 900 handles

The self-optimization software Maus CAAT is the first of its kind on the market and has been patented by Reichmann. It

parts weighing up to 200 kilograms with ease. After three years of automation, any initial reservations among the team have disappeared. Employees appreciate the noticeable relief, the significantly shorter processing times – and the gain in precision. **Economic Impact and Market Position**

Schmiedeberg Guss is part of the DIHAG Foundry Group, with the company's first documented mention dating back to

1412. The foundry produces around 15,000 tons of castings annually, with approximately 3,500 different components ranging

from 0.5 to 400 kilograms in weight. These parts are used in sectors such as rail transport, hydraulics, and commercial vehicles. Within the DIHAG Group, Schmiedeberg acts as a flexible niche provider, known for its industry diversity and small-batch

production – a key advantage in economically volatile times. Industry Conditions and Political Framework

According to Managing Director Holger Kappelt and Foundry Manager Dr. Falko Uyma, the German foundry industry is

currently under significant pressure – primarily due to high energy prices. To ensure the site's competitiveness, they advocate for:

· A realistic energy policy, including a more balanced evaluation of technologies like green hydrogen

Affordable industrial electricity

- · Greater societal and political recognition of foundries as key industries in recycling, energy efficiency, and manufacturing technology
- The importance of cast components for mechanical engineering, infrastructure, mobility, and energy technology is often underestimated – yet foundries are essential to nearly every industrial value chain.

Outlook Following a mixed year in 2024, Schmiedeberger Gießerei is fully booked again in 2025. Early indicators from the

hydraulics sector suggest a continuing positive trend. Investments in modern machinery and digital solutions are

strengthening the site for the long term. We wish the team continued success and all the best on their journey into the future of foundry cleaning.



