

## World novelty: Innovative MAUS CAAT software optimises MAUS machines for top performance



**The MAUS CAAT software, developed and patent pending by Reichmann, optimises machining programmes of MAUS machines in previously unattained dimensions. Initial tests confirm the software's promising potential with cycle time and productivity increases in automatic grinding in the double-digit percentage range. MAUS CAAT will be presented to the public for the first time at this year's GIFA trade show in Düsseldorf.**

The Maus machine line already sets new standards in automatic grinding without further programme optimisation.

The exceptionally simple programming is convincing all along the line. Machining programs can be created on a Windows-based interface through intuitive teach-in with structured plain-text comments. This reduces the time required for programming and ensures a high degree of clarity, a fast-learning curve and a high level of acceptance, especially for machine operators without prior knowledge. The high machining quality is also outstanding. The optionally available laser measurement compensates for tolerances in the tenth of a millimetre range and thus ensures finished contours.

Besides, an automated machine that is easy and safe to operate facilitates foundries to attract personnel for casting finishing tasks. This ensures that capacity is maintained in the long term and productivity can be increased. The high power density, maximum availability and robust machine design "Made in Germany" guarantee that the machine is highly economical.

### **MAUS CAAT exploits previously unused potentials**

The new operating system for the Maus grinding machines offers huge potential for Industry 4.0 and 5.0 and can support the user with the help of state-of-the-art technologies such as IIoT or artificial intelligence to further increase machine performance and productivity. With

the new "computer aided automatic tuning" self-optimisation software for MAUS grinding machines, "MAUS CAAT" for short, Reichmann is taking a big first step to make use of these possibilities. For the first time, machine data such as the spindle and drive power during operation, are available to the operator in a structured form and can be used for optimisations manually and automatically.

## **Industry 5.0: MAUS CAAT ensures perfect interaction between operator and machine**

The Industry 5.0 concept is about optimised interaction between operator and machine. Intelligent machines should help people to work faster and more efficiently. This is precisely where the MAUS CAAT software, developed and patent pending by Reichmann, comes in.

The programme code created by the machine operator for finishing a new casting is analysed block by block with the help of MAUS CAAT. During the machining process of the first castings, the software specifically detects even the smallest weaknesses and optimisation potentials in the programme. Wherever there is potential for increasing spindle and drive performance, the feed rate is increased iteratively. In this way, MAUS CAAT optimises the machining programme in the shortest possible time to achieve top performance with maximum time savings while making optimum use of the machine's output. In addition, the software adapts the machining speed to the weight of the casting directly during machine loading. This means that relatively light workpieces can be machined even faster. This results in a perfect interplay of human and machine intelligence.

## **Self-optimisation provides a leading edge**

"In initial tests, MAUS CAAT was able to speed up ready-optimised teach programmes by over 15% and provide the appropriate input to the programmer for further optimisations. That's 15% more parts in the same time," reports Rafael Dineiger, International Sales Manager at Reichmann & Sohn GmbH. These accelerations would classically only be possible to a significantly limited extent using the multi-eye principle and with considerable time expenditure. "This completely new type of computer-aided, automatic optimisation gives our customers a decisive lead over the competition," says Rafael Dineiger.

The easy-to-understand user interface of the MAUS machines enables the machine operator to set up and use the software easily and parameter-controlled as required. Foundries that have already invested in a MAUS grinding machine can save valuable time and costs with MAUS CAAT by automatically optimising the programme sequences and maximise their productivity.

## **Premiere at the Gifa trade show in Düsseldorf**

The combination of a MAUS grinding machine and the MAUS CAAT software offers a complete package that is unique on the market. Interested trade show visitors can experience the machine, which accelerates itself, live at Gifa in Düsseldorf from 12 - 16 June 2023 at the Reichmann stand 17D61.