

Hard to grasp

Hager & Meisinger GmbH solves measurement tasks with a Fixator



Hager und Meisinger GmbH in Neuss is familiar to every dentist. MEISINGER drills have been manufactured there since 1888. The „Made in Germany“ quality has ensured an excellent reputation to this day, which has since been expanded to other business fields such as dental implants, jewellery processing and pedicures. A new optical measuring machine presented quality assurance with a real challenge, which was mastered with the FIXATOR clamping device from Hegedüs.



Hager und Meisinger GmbH in Neuss is the epitome of dental drills.

Extremely high speeds and sensitive medical applications do not tolerate any mistakes. That is one of the reasons why at Meisinger all items are manufactured in full depth of production at the company headquarters in Neuss. More than 350 employees work daily to provide high-precision medical instruments for drilling, grinding, polishing and milling. Since 2002, the portfolio has been extended to include „Bone Management“. A program covering titanium implants in the human jaw.

Extremely high quality standards

Every year, millions of products leave the factory and are shipped all over the world. The quality requirements are extremely high. A high-tech machine park unique in the world is working constantly at the frontier of producibility.

Uwe Ohligschläger is jointly responsible for quality assurance at Meisinger and can quantify the accuracy: „We are working within the decimal range from a micrometre level to a nanometre level.“ This is remarkable considering that a hair already measures 0.10 µmm.



The Hegedüs FIXATOR clamps every part in the same way, with absolute process reliability.

The customer outsources

This consistently high level of precision also prompted a major customer to outsource large parts of its production to Meisinger. The customer uses an optical measuring machine to check the incoming goods. In order to ensure a qualitatively seamless transition, Meisinger decided to purchase the same measuring machine model for the outgoing inspection.

Metrological odyssey

The optical measuring machine went hand in hand with the ordering of clamping devices for rotationally symmetrical parts from the manufacturer. A so-called FIXATOR with a set of standard clamping jaws was delivered. This started a metrological odyssey for the measurement engineer Ohligschläger.

„We simply could not achieve any stable measurement results and we began troubleshooting. In the areas in which we work, this can be the smallest details: such as ambient temperature, installation errors, light influences, dust particles, the clamping device itself or the type of application.“

Standard is not enough

Uwe Ohligschläger found the cause: „It took some time before we were able to rule out several factors and ascertain that it was actually the clamping device, more specifically the standard clamping jaws supplied by the measuring machine manufacturer. Our parts wobbled because the prism grippers could not manage to optimally hold the part.“



Uwe Ohligschläger is jointly responsible for ensuring reliable results in measurement technology:
„The ability to consistently repeat the clamping is just as important as the measuring machine itself.“

Difficult bevel

The interface between the tool and the drive is called the „bevel“. It is essentially concerns the holder. This was very special for this customer. A hexagonal profile with two round edges made correct clamping so difficult. A customized solution for the jaws of the FIXATOR was needed.

FIXATOR Hersteller Hegedüs

Intensive inquiries at the manufacturer of the measuring machine were initially unsuccessful. „Finally we received the information that the Hegedüs company was the manufacturer of the FIXATOR and then everything happened very quickly.“

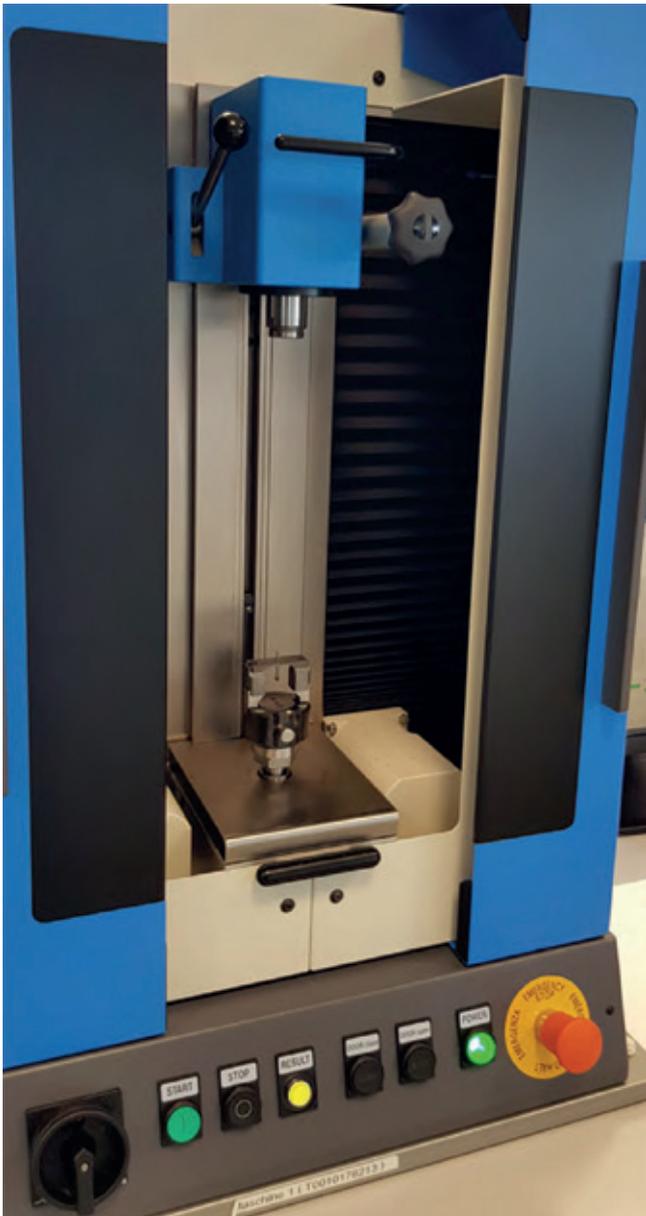
Viktor Hegedüs GmbH analysed the measurement task and manufactured individual clamping jaws, which immediately remedied the problem. „From now on we had precise results and were able to measure with absolute process reliability and exact repeatability. Confidence in the measuring machine and the measurement has returned. If we previously carried out a 100 percent test because of uncertainty, today we get by with random measurements.

The FIXATOR saved us a lot of time and stress.“

Repeatable clamping is crucial

Thanks to the high level of reliability, Meisinger quickly became a top supplier to the customer with the best ratings.

Uwe Ohligschläger is still fascinated by the precision of the measurement results: „Even though we work within the decimal μm range, we and the customer get exactly the same measurement result. That is truly remarkable. This shows that the ability to consistently repeat accurate clamping is just as important as the measuring machine itself.“



Expansion of video measurement technology

With the certainty that almost any task can be solved with the Hegedüs FIXATOR as a measuring device and the possibility of individual adaptations, the measurement engineer, Ohligschläger, is already using the FIXATOR for other applications:

„The FIXATOR is opening up entirely new perspectives for us and we are actually considering a very broad range of applications. To be precise, we have equipped our video measuring microscope with a FIXATOR. Whereas in the past the alignment of a drill could become a game of patience, today we can do it in a matter of seconds with a flick of the wrist.“ It is astonishing how small aids precisely tailored to the application can achieve great things.

The time saved by the FIXATOR makes it attractive for other applications.

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