

INGENUITY AND COURAGE

AS A SUCCESSFUL RECIPE FOR A GOOD PARTNERSHIP



Software-based automation simplifies processes in complex tool and mould making

An ideal partnership exists when all involved parties benefit from each other. This has been achieved in the partnership between Hexagon Manufacturing Intelligence, a leading provider of technical measurement and production solutions, and Zimmer & Kreim GmbH & Co KG. The medium-sized mechanical engineering company with its headquarters in Brensbach/Odenwald, Germany supplies its international customers with technologically leading products such as eroding machines, handling systems and software solutions. The combination of precise measurement technology and an individual automation solution makes it possible to fully meet the high quality expectations of customers predominantly doing business in tool and mould making.



Since Zimmer & Kreim was founded more than 30 years ago, customer requirements have changed enormously. "As a medium-sized company with both diverse and extensive expertise in one organisation, we have been living and practising Industry 4.0 for years by being open to new things and possessing a clever ability to look beyond the horizon", explains Michael Huth, Head of Sales and Marketing. "In order to meet the individual requirements of our customers, we combine innovative technologies and a great deal of experience. This lets us achieve unsurpassed efficient interaction between hardware and software. The holistic view requires committed, interdisciplinary collaboration every day. In Hexagon, we have found a reliable partner to further optimise our processes and achieve a high degree of automation".

Reliable results in the shortest possible time – with minimal effort

Customers in tool and mould making have also seen a lot of changes in the last few decades. Their own customers have made changes in design and sought more individuality, requiring tremendous flexibility and smaller batches. In the past, around 5 million parts were produced from one original form; today, this number has fallen to just 500 000

pieces for the most part. The demanded traceability requires documentary proof. Here, RFID chips and QR codes help to assign the included measurement reports. They enable the identification of the individual parts and save the end customer an incoming goods inspection. When the delivery note is generated, the appropriate measurement report is printed automatically. Full capacity utilisation is essential for competitive reasons and due to shorter product life cycles. But round-the-clock shifts also increase staff costs.

Zimmer & Kreim supplies the components for automated solutions to achieve precise milling or eroding, and these can be integrated into existing processes. When requirements change, the systems can be adapted and expanded. In the industry, it is all about the greatest precision, and the first part must fit in small batches.

By integrating measurement technology into production, Zimmer & Kreim's customers not only gain time, but also avoid lengthy part transfers and save money. Quality assurance takes place on the line rather than in the measurement laboratory. Possible errors are detected and eliminated at an early stage. The route from the raw part to the finished part is simplified by integrating the measurements into the processes and thereby saving staff resources. The measurement technology hardware, which is also designed for use under harsh industrial conditions, and the user-friendly software can be integrated directly into the production processes. Production staff use the self-explanatory software, while quality assurance experts can focus on other tasks. A continuous presence of skilled workers during shifts is no longer required.

Thanks to its portfolio and many years of expertise in measurement technology, Hexagon is the ideal partner for Zimmer & Kreim. Modular systems create flexible and small solutions.



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Michael Huth

Head of Sales and Marketing
Zimmer & Kreim GmbH & Co. KG

Hexagon's Preset & Measure software makes it easy to determine offset data for presetting electrodes. A data-technical connection between the production line and measuring room allows for quality measurement in production. Supplemented by the Hexagon Inspection Planner, this offset data and the quality measurement points are quickly generated offline in the CAD model and then automatically measured on the real component. An efficient and flexible post-processor provides the measured data in the desired format for further processing with eroding, milling or other machines. The supervisor acts as an interface between the PLC robot and the measurement technology; it can be flexibly adapted to the existing hardware and software environment.

Living out a win-win situation

The partnership between both companies has led to synergy effects. On the one hand, it was always possible to improve the adaptation of the software to the electrode measurement requirements, while, on the other, the software was simplified. The development of an interface connector that replaces the previous terminals now makes the start-up significantly easier, for example, and also helps with the avoidance of errors in installation. The interpretation of the incoming signals can still be flexibly adjusted in the supervisor. The open interfaces of the software allow for both the excellent integration of the measurements into the production process and feedback to higher-level control systems such as ERP systems. As a result, individual customer requests can be implemented in just a few programming steps. Such parameters make the commissioning of the entire system much easier, safer and ultimately more cost-effective.



The Head of Sales and Marketing of Zimmer & Kreim GmbH & Co. KG – Michael Huth – explains a system where measurement technology from Hexagon has been integrated.

In the future, Zimmer & Kreim would like to expand its market presence with automation and software solutions for the measuring room as well. It is absolutely necessary to supply state-of-the-art measurement technology and be quick in reacting to market changes to do this. The partnership with Hexagon opens up new paths in this context. This is especially the case because the Wetzlar-based company is a strong global supplier in Asia as well, where numerous Zimmer & Kreim customers are also located. This ensures short information paths and fast onsite technical assistance. "We only leave the construction site when the customer has everything running perfectly, and their employees understand all the processes", explains Michael Huth in regard to his company's philosophy.



Hexagon Manufacturing Intelligence helps industrial manufacturers develop the disruptive technologies of today and the life-changing products of tomorrow. As a leading metrology and manufacturing solution specialist, our expertise in sensing, thinking and acting – the collection, analysis and active use of measurement data – gives our customers the confidence to increase production speed and accelerate productivity while enhancing product quality.

Through a network of local service centres, production facilities and commercial operations across five continents, we are shaping smart change in manufacturing to build a world where quality drives productivity. For more information, visit HexagonMI.com.

Hexagon Manufacturing Intelligence is part of Hexagon (Nasdaq Stockholm: HEXA B; hexagon.com), a leading global provider of information technologies that drive quality and productivity across geospatial and industrial enterprise applications.

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