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24/7 – Efficient solutions beyond technological limits

Zimmer&Kreim presents automation solutions for the small batch production

Nowadays, the subject of automation is the central issue in the matter of efficiency and competitiveness. Barely a company, no matter how specialised, may shut itself off to this development. Zimmer&Kreim - as system provider of automated solutions - has demonstrated efficiency for the one-piece-workflow for decades and thus proves that automated processes even pay off in case of single parts or small batches.

Beyond technological limits

The look beyond the limits of eroding has already been the mission of Zimmer&Kreim for decades. Thus, ZK has become a leader in the issue of properly projecting processes in terms of hard- and software. Zimmer&Kreim also has a considerable know-how in considering singular technologies (measuring, milling, EDM or laser machining) and increases the added value, ROI and efficiency in companies with its solutions. In addition to eroding, ZK focusses on the subjects of milling, quality measuring and laser machining for the EMO 2017. There will be system conditions on the booth regarding these subjects, which shall present the combination of each technology in connection with automated processes. "Each individual technology profits from our automation", emphasises Armand Bayer, Managing Director of Zimmer&Kreim – "With our hard- and software know-how, we are able to offer the perfect solution for each technology. Our aim is to ensure a 24/7 operation for our customers - no matter which machine combination is used in his company."

With this aim, ZK continuously develops its systems. On the occasion of the EMO, there will be innovations in eroding in the field of control function. The software modules are also continuously developed and improved. For example, the module *Processmod* - by means of which you may better illustrate the utilisations of all machines now. With this organisation module, you may visualise the process steps in the workshop. The person in charge may see the processing stage and the location of his workpieces at one glance. Important information such as utilisation, status and feedbacks of the individual machines are also presented visually. It is also possible e. g. to present the utilisation retroactively for the entire lifetime of the machine by means of the information saved in the database. Or only for a selected period.

Fair novelty: Quick-Preset cuts setup times by half

On the occasion of the EMO, Zimmer&Kreim presents the module Quick-Preset as fair novelty. The device saves time when pre-setting electrodes. Until now, two manual working steps were necessary: manual identification and manual determination of the Z offset values. With Quick-Preset, both working processes are performed in one. A laser detects the offset values while the parts are identified at the same time. Easily and quickly at the touch of a button. The values are automatically assigned to the parts and are stored in the system.



Fair novelty: Chameleon5 – faster and more accurate

Even if it seems to be unchanged on the outside, something was changed significantly at the *Chameleon* Linear with the expansion stage 5. The velocities in the X-, Y-axes have been improved by approx. 60 %. The rotating range in the C-axis was increased from 270° to 370°. In general, this enables even more rapid change processes with highest positioning accuracy.

Precise milling around the clock

Service lives, precision and processing times – these are the key facts of milling. Zimmer&Kreim developed the automated changing of the so-called “medium distributor” in cooperation with MHT. With this innovative technology it is possible to cool the milling tools, resp. the cutting edges of these tools, during the milling process, to lubricate these with minimum quantities or to blow away the developing chips with air. An attachment element allows the installation at the spindle. The corresponding sleeves and the fan are changed automatically with the *Chameleon* during processing. For this purpose, ZK developed the appropriate gripper technology and provided modified magazine levels. In this way, it is possible to use and automate the new procedure for all common milling machines.

“Changing times, processing times and tool lives are considerably improved in this combination”, confirms Michael Huth, Head of Sales and Marketing, the successful cooperation.

Quality measuring and 3D laser engraving with *Chameleon5* in 24-hour operation

The fair visitors may see similarly good results in case of the combination of a *Chameleon* Mono with a measuring machine equipped with a zero-point clamping system (Zeiss). With the quality measuring, it is not only possible to quickly identify contour errors at electrodes but also at workpieces/components by means of a comparison with the 3D data set. The ZK software provides interfaces to measuring software programmes of all known manufacturers and thus ensures the feeding of the machine in unmanned operation around the clock. The combination *Chameleon5* Mono with job management and measuring machine demonstrates that the automated application is also suited for measuring in small batch production. At the same time, all measured data is saved and logged in the database and is available for further processing (e. g. quality management, ERP, etc.).

The 3D laser engraving is not suited for large surfaces and great depth. It is, however, ideally suited for engravings of up to 2 – 4 mm; e. g. for marking stamps. “Even specialised companies will realise that laser engraving pays off in 24-hour operation”, says Armand Bayer. “Our current job managers, e. g. with the company Acsys, confirm an utilisation of up to 95 % in 24-hour operation.”

The company may obviously feel the higher efficiency of the processes, the competition, however, as well: “Because such automated companies are not affected by pricing pressure that quickly anymore”, says Bayer.

In the combination of the divisions ZK Software, ZK Automation and ZK EDM, Zimmer&Kreim may offer a unique portfolio to its customers. The fair visitors will now have the best opportunity to evaluate this – at the EMO in Hannover, Hall 13, Booth B 86. We would like to invite you to visit us at the booth.