



Flexibility for batch size 1: Thanks to special clamping technology, the turning-milling center from DMG offers new possibilities for machining complex, chalk-like preforms.

Boehlerit continues investment programme to boost in-house production



With the purchase of the turning/milling machine DMG CTX beta 1250 TC, the carbide experts from Kapfenberg performed a technological leap that will open up new customer groups.

“The machining of so-called ‘green parts’ confronts toolmakers with a range of challenges: Clamping these soft, chalk-like, and therefore highly sensitive workpieces is especially difficult! The goal is to complete as many machining steps as possible on a single unit.” The new turning/milling machine does exactly that: An extensive tool magazine provides a range of machining options with optimised set-up times. All preforms must be machined

on both sides, and the repositioning this requires is completed automatically in the machine. The air pressure-controlled Röhm clamping technology works with the aid of sensors and is highly sensitive, which means that it may be adapted to the different requirements of each workpiece. Flexibility is key, as “batch size 1” is the norm. The pressure on the clamping jaws must also be checked and monitored regularly to compensate for wear, dirt, and deterioration of the clamps. “The centrifugal forces of the clamping jaws in case of high speed frequencies is also taken into account and compensated for”, adds Martin Willinger. Thanks to this sophisticated system, process safety is maximised. After all, “extreme challenges such as these only

occur in carbide manufacturing”, says Karl Dotter, Head of Process Planning for carbide machining at Boehlerit.

Simulation before production

At the same time as purchasing the turning/milling machine, Boehlerit has upgraded its programming system, which had already been in use for in-house turning. The software experts of Pimpel GmbH have now also implemented the Esprit CAM system for milling applications. The Esprit SolidTurn Multi-Spindle has opened up a new dimension for Boehlerit. “The biggest advantage lies in the fact that the main and counter spindle are synchronised with the B axis”, explains Karl Dotter. This feature allows for the simultaneous

turning and milling with up to five axes and ensures the exact maintenance of positions during the transition from main to counter spindle, making the exact machining of the front and rear of workpieces possible. "Until now, this required quite a lot of additional effort", says Dotter. A special software feature now allows for the simulation of the entire machining process. This means that errors may be avoided effectively and results may be assessed on the monitor - an essential technological step ahead when it comes to the complex manufacturing of individual parts.

Time-saving expertise

With this investment, Boehlerit is yet again putting its expertise to the test, now also in the manufacturing of precision tool blanks. This has reduced machining times by at least a third and made it possible to deliver specific, customised tools within just ten working days from the order date. Boehlerit is also considering extending its production technology facilities in the Kapfenberg headquarters, with the Boehlerit sites in Germany and Turkey following suit, all with the goal of optimising production and delivery cycles even further. ■

Martin Gold/Freier Redakteur