ZELLER+GMELIN

Press Release

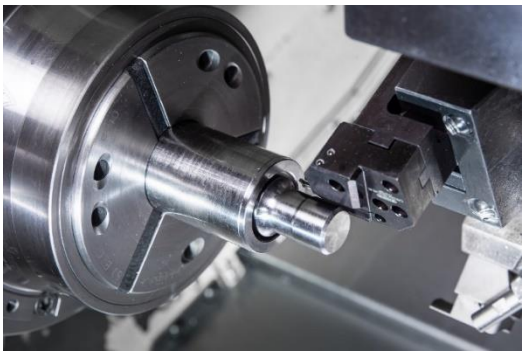
New lubricant for mask production

Weber Ultrasonics opts for a lubricant from Zeller+Gmelin for axial grooving

The manufacturer of ultrasonic welding equipment for mask production, among other things, wanted more process reliability in the machining of materials that are difficult to machine: With tools from Paul Horn GmbH and cooling lubricants from Zeller+Gmelin, the Karlsbad-based specialist for ultrasonic components and systems was able to find two suitable partners at once.

The ultrasonic systems are used, for example, in the production of a wide variety of medical technology applications, for example medical masks or medical components such as membranes, adapters and connectors and even surgical instruments. In particular, the demand for ultrasonic welding technology for the series production of medical masks made of non-woven fabric has increased dramatically due to the pandemic. The vertical range of manufacture at Weber Ultrasonics is enormous: almost all components and assemblies of the ultrasonic systems are manufactured in-house. For a special titanium component, the so-called converter, the machining process used is grooving, or more precisely axial grooving. In order to be able to guarantee process reliability and long tool life even with increasing quantities, new tool solutions were sought. Previously, chatter marks on the surface of the deep grooves were a recurring problem.

Zubora ensures more process reliability



With a new axial grooving system from the Tübingen tool specialist Horn, a process-safe solution was found: the new S15A grooving insert had produced a stable machining process right away. At the same time, a new cooling lubricant is used in the form of Zubora TTS, which was developed in a joint project between Horn, Zeller+Gmelin and a major machine manufacturer. "All the experience of the lubricant manufacturer, machine builder and tool specialist has gone into the development of the new lubricant," says Jürgen Schmid, Product and Project Manager Sales at Horn, seeing an enormous advantage. "The idea of the project was to develop a new and more efficient coolant for the machining of superalloys. Zeller+Gmelin has achieved this with the development of the new coolant." And Business Unit Manager Thorsten Wechmann from

Zeller+Gmelin GmbH & Co. KG · Schlossstraße 20 · 73054 Eislingen/Fils · Germany · Postfach 13 65 · 73054 Eislingen/Fils
Phone: +49 7161 802-0 · Fax: +49 7161 802-290 · info@zeller-gmelin.de · Geschäftsführer: Dipl.-Ing. (FH) Siegfried Müller
Dipl.-Kfm. Walter Jerusalem · Dipl.-Ing. (FH) Thomas Alpers · Kommanditgesellschaft Sitz Eislingen · Amtsgericht Ulm HRA 530107
Persönlich haftende Gesellschafterin Zeller+Gmelin Verwaltungs GmbH · Sitz Eislingen · Amtsgericht Ulm HRB 530641

Zeller+Gmelin adds: "After successful tests on various superalloys, the first field test at Weber Ultrasonics was now on the agenda. By using Zubora TTS in combination with a new tool coating, the tool life could be significantly increased. The completely new formulation leads not only to an increase in tool life but also to an improvement in the surface quality of the component. Furthermore, it was possible to increase the cutting parameters and thus sustainably increase profitability."

Chip breaking under control

Weber Ultrasonics says that by optimally matching the tool and the cooling lubricant, it has been possible to significantly improve chip control. The problem of uncontrolled long chips is now a thing of the past. Tool wear has also improved measurably and visibly thanks to the new Zubora coolant.

The new cooling lubricant Zubora TTS is a fully synthetic solution. According to manufacturer Zeller+Gmelin, the focus of the novel concept was on lubrication, chip breakage support and surface quality improvement. "We have developed the new coolant for the productive machining of titanium and other super alloys. However, the product can be used multifunctionally and also brings advantages when machining a variety of other materials," explains Thorsten Wechmann.

Your contact person:
Andreas Rascher
Marketing
Schlossstraße 20
73054 Eislingen/Fils
Phone: 07161 / 802 - 352
E-Mail: a.rascher@zeller-gmelin.de