DIETERLE

Rottweil, 09th September 2020

Best Contacts in Electro Mobility

Form drills replace four standard tools and reduce processing time in the production of copper contacts for use in hybrid electric vehicles

Geissler Präzisionsdrehteile GmbH has been manufacturing complex turned parts and assemblies on behalf of customers for more than 50 years. Global players in the automotive industry, medical technology, electrical engineering as well as measurement and control technology are supplied just-in-time from Bruchköbel in Hessen, Germany.

Turned parts in the diameter range from 0.8 to 32 mm are realized on Escomatic automatic ring turning machines, the latest CNC-controlled machines, Swiss type and sliding headstock lathes as well as straightening and cutting machines. Numerous post-processing machines are available to achieve appropriate surface qualities and cleanliness. To implement the 0-fault philosophy, all parts in the production are SPC monitored. Constant checks in production with the collection of all relevant data enable seamless traceability of all parts.

Tools that guarantee uncompromising precision are required to manufacture these complex turned parts. "When it comes to tools, we rely on Otto Dieterle Spezialwerkzeuge GmbH from Rottweil in Germany. We have already been working together for many years, as Dieterle always provides us with optimal solutions, even for very demanding projects," says Christian Pommer, operations manager at Geissler.



One of these demanding projects is the production of copper contacts for use in hybrid electric vehicles. The parts are manufactured on a CNC Swiss-type lathe and require a multi-stage drilling, which must be carried out extremely precisely in terms of diameter and position. This is the only way to ensure in the further manufacturing process that a counterpart, which is pressed in, fits perfectly. "In order to ensure that these parts are manufactured reliably, the precision of the drilling is crucial," emphasizes Christian Pommer.

In order to meet these requirements, the parameters of the form drills must be optimally adapted to the workpiece and the material to be machined. Christian Pommer and Martin Brumm, field sales engineer at Dieterle, were responsible for the project in close cooperation.



The required profiles were quickly and easily realized in consultation with Matthias Heckel, design engineer for form drills / cutters at Dieterle. "After submitting the required data, Dieterle was able to quickly present us a suitable solution for this project," comments Christian Pommer.



"Thanks to our decades of experience in the production of form drills, we can develop the ideal tools based on the individual circumstances of our customers," says Martin Brumm.

Compared with standard tools, the use of form drills enables several work steps to be combined into one, thereby reducing costs. "Dieterle has designed a driven cross drilling tool for us, which replaces four individual tools. An excellent service life of 15,000 parts per drill is achieved. This means, we not only save the use of tools, but also reduce production time by 10% compared to the conventional method with several tools," comments Christian Pommer.

Geissler also profits from the regrinding service of Dieterle. "We use the Dieterle regrinding service not only for form drills, but also for other tools. This enables us to achieve consistent quality. Another advantage is the cost and resource savings compared with new production," says Christan Pommer.

The advancements in electro mobility are an equally forward-looking topic for the manufacturers of turned parts and tools. Geissler Präzisionsdrehteile GmbH and Otto Dieterle Spezialwerkzeuge GmbH deal intensively with this topic and will successfully master the upheavals that electric mobility brings with their experiences and innovations for their customers.

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