



There's a new Delta around the World

Zaigler Maschinenbau GmbH

We're in Kulmbach, Upper Franconia, in the heartland of Germany. *Zaigler Maschinenbau GmbH* is a company that specializes in the machining of large-size components for the rail industry, printing machines



and the large energy generators. Production is usually made in small lots, sometimes with only an individual component, but always very peculiar ones. For this reason, it is essential for Zaigler to be able to guarantee their customers an extreme amount of flexibility in terms of production and, therefore, in dimensional inspection.

Moreover, the typology of components requires the availability of uncommon machines: the parts that are machined in the Zaigler manufacturing facilities often reach 12 meters length, 3 meters height, 5 meters diameter, and a weight that may reach 35 tons. Boring machines, milling machines, machining centers and boring mills that are not only large-size but also high-accuracy are the feather in the cap of this company. Its show piece is its Quality Control for which two sizable investments have been lately approved. They're two brand-new DEA coordinate measuring machines: a Delta HA CR 25.51.20 that is already up and running and a Global 12.22.10 that is going to come soon.

The Delta HA, featuring a maximum permissible error of $5.5 + 5.5 L/1000$, a tool changer and a probe tip changer, as well as the provision for integration of scanning sensors, ensures it to be able to meet all present measuring requirements, but it also looks ahead to the future - new activities and prospects.

Measuring with accuracy such large-size and large-mass components requires solutions designed and made with painstaking care. First of all, the dimensioning of foundations: to ensure the rigidity of the whole measuring system subjected to up to 30 tons loads and insulation from vibrations induced by machine tools, a 80 m³ inertial block has been made. Nothing new however for Zaigler, that has gained a wealth of experience in this field by installing its own machine tools, and that in this case has built the foundations for Delta. The loading/unloading of parts in the measuring volume of the machine is performed by a motorized system, that is able to



move components up to 20 tons in weight from the machining area to the control room. The carriage, 5 meter length and 2.5 meter width, is guided on rails to the precise position in which measurements will be performed. It rests on supports by means of a hydraulic system. To ensure the measuring system a suitable environment, a temperature-controlled room has been built. Space in it is enough not only for the measuring machine and the fixtures, but also for the temporary storage of machined parts that need to reach ambient temperature to be measured in the proper temperature conditions.

The PC-DMIS measuring software and an equipment of sensors and accessories similar to the one of the Global 12.22.10 to be installed, will guarantee the full compatibility between the two measurement systems. The important project of strengthening the dimensional inspection capacities of the company will thus be completed.

“We trust that we’ve made the right move towards the future of our company - maintains Mr Stefan Zaigler -, we’ve succeeded in completing this project in a relatively short time thanks to the excellent co-operation



with Hexagon Metrology, that has proved a reliable partner in all phases of delivery. The quality of our production is essential to guarantee a lasting relationship to our customers”. ■





Hexagon Metrology

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