







The Bearing News team had the chance to discuss BETC's rolling bearing analysis services during an exclusive interview with its Executive Director, Dominik Helfrich Dipl.-Ing.

Being a former laboratory engineer at the Chair for Quality Management, Production Measurement, and Rolling Bearing Technology, a certified expert and a member of the German Association of Professional Experts; Dominik Helfrich Dipl.-Ing. headed the Steinbeis Institute for Rolling Bearing Technology since 2017, and founded the BETC GmbH within the Madinger Group in 2022.

Can you explain in more detail what services BETC GmbH offers?

For rolling bearing analysis, you need an expert with the most advanced analysis equipment, testing options, and experience from steel production to bearing assembly. We offer individual analyses that are specially tailored to the respective customer application.

Our core competence, "rolling bearing analysis," is divided into two major areas, damage analysis and quality assurance. The latter specifically involves product

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audits, product benchmarking, incoming goods inspection, contract measurement, and testing on individually designed rolling-bearing test benches. In addition, the strong network within the Madinger Group means we can offer our customers

services such as standard-compliant (according to VDA 19.1) production and inspection of technical cleanliness, nondestructive testing, or visual inspection for rolling bearings in large quantities. Can you tell us more about BETC GmbH?





How does your approach differ from other service providers in this area?

We look after international customers across all industries and stick to our motto: Rolling bearings should do one thing above all: work! Above all, our customers appreciate our independence, experience, personal and comprehensive support and advice, flexibility and reaction speed, the reliability of the data as a sound basis for decision-making processes, and cost-effectiveness in every phase of cooperation. In particular, we note that companies benefit from transfer of know-how and understand their own application even better.

You mention the quality assurance of rolling bearings as a business area. Can you explain in more detail what this entails and how it benefits your customers?

For many of our customers, the rolling bearing is a standardized machine component that is purchased and that has to work. If there are problems or questions regarding the quality of the rolling bearing, the company's internal rolling bearing know-how is often not enough. Our services are needed especially when customers qualify and validate new rolling bearing suppliers/manufacturers. For this, we carry out product benchmarking and product audits individually tailored to the customer's



requirements. The advantage for the customer is a holistic rolling bearing analysis across the various areas of investigation, such as measurement technology, metallography, and special testing techniques, which take the application's requirements into account.

For what kind of customers and industries is rolling bearing quality assurance interesting?

In principle, this service is of interest to all companies that buy, sell and manufacture

rolling bearings. For rolling bearing distributors and manufacturers, we are the independent party in the customer-supplier situation, providing expertise on rolling bearing quality based on test results.

The industry itself does not initially play a role here. We can validate rolling bearings for medical devices with a bore diameter of 4.0 mm up to rolling bearings for wind turbines with a diameter of up to 1500 mm.





The fact that you are an independent service provider also plays a decisive role in damage analysis, doesn't it? And what characterizes damage analysis at BETC GmbH?

Yes, that is correct. Independence is very important for our customers and their suppliers, as this is the only way to ensure an objective examination and assessment.

Another big advantage is that the affected rolling bearings are examined holistically in-house (in our own laboratories). To determine the cause of the damage, all relevant aspects from the measurement technology, the metallography, the lubricant analysis, and the bearing calculation are combined with the data conditions and requirements of the application to form a holistic picture. This approach and the consideration of the application or the entire system characterizes the damage analysis we carry out.

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Finally, one last question, how do you see rolling bearing technology developing in the coming years? What are the most important trends and challenges at the moment?

The greatest challenge in rolling bearing technology is finding the right bearing for each application that consistently has the required quality and is available at an economical price. Because the customer only has the desired benefit if the bearing price and quality match the application. From our experience, there are often problems with "plug-and-play solutions"

from different bearing manufacturers in functioning and tried and tested applications. The increased output density of previously functioning applications can lead to problems and bearing damage. Another challenge we currently have to face is the availability of rolling bearings. Whether rolling bearings in large quantities or special bearings or solutions, delivery times are sometimes not predictable.

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Dominik Helfrich Dipl.-Ing.Executive Director BETC – Bearing
Engineering & Testing Center GmbH

Dominik Helfrich received his degree from the Technical University of Schweinfurt in 2015. After completing his mechanical engineering studies in the mechanical engineering faculty, he worked as a laboratory engineer at the Chair for Quality Management, Production Measurement, and Rolling Bearing Technology, where he gained experience in rolling bearing validation and rolling bearing measurement technology. From 2017 to 2022, he successfully headed the Steinbeis Institut für Wälzlagertechnik (Steinbeis Institute for Rolling Bearing Technology) and focused on quality issues and damage analysis. Born in Schweinfurt, he founded BETC GmbH within the Madinger Group in 2022 and is responsible for the operative business as one of three executive directors. Dominik Helfrich B.Eng. is a certified expert and a member of the Deutschem Gutachter und Sachverständigen Verband (German Association of Professional Experts; "DGuSV")



BETC

Foundation: April 2022

Headquarter: Madridstraße 2, 97421 Schweinfurt, Germany

Company Structure: Part of the Madinger Company Group

Technical Capabilities: Accredited measuring laboratory, metallography

laboratory and non destructive testing

Special Service: "Rolling bearing consultation hours"

is a free technical customer support which is explicitly tailored to

the customer's requirements

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