

INNOVATIVE TECHNOLOGIES

The ability to innovate is essential to remain competitive in the long term, i.e. permanently. This is why Feintool has continued to make targeted investments in employee training and teamwork in 2019 and has pursued joint research and development projects with ETH Zurich, RWTH Aachen University, and Jiao Tong University Shanghai. Feintool sees great potential in metallic bipolar plates for fuel cell production. The company has made significant progress in this respect, with a complete production concept and important partnerships in place.

A BREAKTHROUGH IN THE DATA ECONOMY Feintool achieves success with research partnerships

Between 2018 and 2019, researchers from RWTH Aachen University, together with Feintool, introduced the first prototype of a data marketplace based on the example of a fineblanking system – thereby opening the door to new digital business models in industry. The future after the Internet of Production (IoP) has begun. This was only possible through the close collaboration between the two partners – which has lasted for more than 20 years.

A truly groundbreaking achievement – this is how Dr. Andreas Feuerhack, senior engineer for forming production processes and head of the Arbeitskreises Feinschneiden at RWTH Aachen University's Laboratory for Machine Tools and Production Engineering (WZL), sums it up. What is new about this project related to digitization? In essence, it's about a fundamental change in production. In the case of fineblanking technology, digital twins were created for all of the components in the value creation process – that is, for the XFT 2500speed fine tool press, for components, lubricants, raw materials, and operators. This data not only provides information that can be used to optimize existing physical systems. In fact, for the very first time, the data itself becomes an asset that can be bought and sold – creating a new virtual market for data in the process. What is missing, however, are prices, because there are neither rules nor any precedents for them. The Feintool project is a proof of concept of the overall project, incorporating the knowledge and many years of experience of the research team. The next step will be to test demand in Aachen – and offer data for sale via a platform to determine prices.

"Our vision is for all of the entities along the entire value chain to work together seamlessly in a collaborative process based on data sets whose prices are negotiated between machines themselves," explains Dr. Daniel Trauth, who, like his colleague Andreas Feuerhack, works at the WZL as a senior engineer and head of digital transformation. This future also has a name: the machine economy. "Today, collaborative

process optimization is not yet the norm. A steel producer, for example, delivers its steel and that's basically the end of the deal for them. In addition, all of the parties involved have concerns about sharing their data transparently. In the machine economy, however, the data is paid for. This will lead to new business activities such as in service – a digital transformation," says Daniel Trauth.

Feintool is at the forefront of this future scenario – in addition to many other projects with the WZL and other research institutions. As a technology group and innovation driver, digital transformation is obviously at the top of the agenda. This is also why Feintool was appointed to an expert commission for the 30th Aachen Machine Tool Colloquium 2020, which has been postponed due to the coronavirus pandemic. The unique thing about this international conference format is that it isn't focused on sharing information about the current state of technology. Instead, the organizers have the courage to anticipate the future and to talk about things like the monetization of machine data that doesn't even exist yet. Not every company can do that. But Feintool is the perfect partner: "With Feintool, we can identify exciting projects at the cutting edge of technology that will also truly have an impact. The lines of communication are short, we chat almost weekly, and are delighted that the projects are a priority for Feintool," says Andreas Feuerhack, with satisfaction.

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renowned universities have been Feintool's premium partners in research and development for decades.

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Institute for Virtual Production IVP, D-MAVT

RWTH Aachen University
Machine Tool Laboratory (WZL)

Technical University of Munich
Chair of Metal Forming and Casting

Jiao Tong University Shanghai
National Engineering Research Center of Die and Mold CAD (ERC)

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