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Factory networks energy, buildings and production

Darmstadt model project is testing the production of the future

In the “ETA Factory” demonstration project, the Technische Universität Darmstadt is researching concepts for multi-networked, industrial production facilities. In the concept, the scientists are integrating the energy flows, building envelope and industrial process chain across technologies and disciplines. The new BINE-Projektinfo brochure entitled “Energy efficient model factory” (03/2018) presents the ETA Factory, which serves as a research object, demonstration facility and place of learning. By shifting the system boundaries between the machines and building, the researchers expect economically feasible energy savings of up to 40%.

The ETA Factory concept aims to reduce energy consumption and increase load flexibility. This is achieved by treating the energy system for the building and production as a whole. The production area depicts a typical process chain for metalworking and includes characteristic processes such as machining or grinding. Intelligent control systems ensure that there is always enough energy at the right time and in the right place. Energy efficiency played an important role in the choice of machine tools used. These are one fifth more efficient than conventional reference systems.

In Darmstadt, an interdisciplinary team from the mechanical engineering, engineering sciences, architecture and communication technology fields is behind the project. Practical experience is provided by joint working groups with various branches of industry.

The public closing event for the research project took place on Tuesday, 11 April 2018. BINE Information Service has published a BINE News article about it at <http://www.bine.info/en/newsoverview/>.

The BINE-Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at www.bine.info or by calling +49 (0)228 92379-0. The brochure cover and additional image material can also be downloaded from this web portal in the press section.

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