



Bosch boiler technology reduces CO₂ emissions by 15 percent

Sustainable potato processing at Henglein

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Food producer Hans Henglein und Sohn GmbH in the Franconian village of Wassermungenau, Germany, has put into operation a new Bosch steam boiler system that will help to achieve a more sustainable and environmentally friendly processing of its potatoes and dough products. The company received attractive subsidies from state development bank KfW amounting to 30 percent towards the investment in the efficiency-enhancing and CO₂ reducing components. This was made possible by modern technologies and a clever conceptual design by Henglein and its efficiency consultant, the local engineering office Tobias Lüpfer and Bosch Industriekessel.

“With our technical documentation, customer-tailored design and 3D symbols, we managed to reduce planning effort and interfaces and achieve the specified efficiency,” says sales engineer Dr. Alexander Vollet, who led the project at Bosch. The latter was also the basis for the awarding of subsidies. The efficiency components used, such as two flue gas heat exchangers, achieve particularly positive effects with savings in fuel and CO₂ emissions of 15 percent. While the efficiency level of the old boilers without economiser was around 85 percent, the new Bosch steam boiler now achieves over 100 percent thanks to efficiency and condensing technology. But also the entire design of the UL-S steam boiler used is based on high energy efficiency. The generously sized combustion chamber and the optimum boiler and burner combination enable particularly low NO_x values. In this respect, the boiler is well below current and future legal limits in Germany and reduces NO_x emissions by around 35 percent compared to its predecessors.

Industry 4.0 applications make an important contribution to energy efficiency improvements during operation, and that's the same at Henglein. The integration of the Bosch MEC Optimize digital assistant was part of the efficiency project and makes it easier to plan future maintenance, rectify faults or optimise efficiency

during operation. Intelligent algorithms collect and interpret the operating data, evaluate the service life of components based on operating mode and analyse water values. Energy losses and thus higher emissions as well as critical states are detected by the digital assistant immediately and it proactively offers the operator recommendation for actions.

With efficiency and intelligence, the new Bosch boiler system at Henglein optimises processes and helps to reduce the carbon footprint significantly. “For us, the topic of environmental friendliness plays a key role, which we are continuously improving with energy-efficient installations and transparency of all energy flows,” says managing director Norbert Henglein. In matters of process heat, Bosch Industriekessel has made carbon emissions reduction technically viable. Plant construction company Petry was entrusted to install the new boiler system technology on site.

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