

BrauBeviale, Hall 7/Stand 630: Steam and heat solutions from Bosch

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West Africa's largest brewery using 20 percent less fuel for steam

At the BrauBeviale trade fair for the beverage industry, taking place in Nuremberg from 28th to 30th November 2023, Bosch is presenting its sustainable solutions for steam generation and heat production. Breweries and drinks manufacturers are facing various challenges when it comes to how to approach their process heat in future. In particular, how to ensure compliance with new emission regulations, which fuel to choose, increasing energy prices and how to achieve carbon-neutral status. At the same time, there is a need to be highly efficient in order to run energy-intensive processes. "We offer a wide range of solutions, from electrical steam generation and cost-efficient heat recovery right through to modernisation of existing plants, for instance converting them to alternative fuels, such as biogas," explains Daniel Gosse, Head of Marketing at Bosch Industrial Boilers.

One example for energy-efficient process heat in breweries can be found in the steam boiler system in operation at International Breweries Plc. in Nigeria. The largest brewery in West Africa is part of Anheuser-Busch InBev, and operates a multivalent system from Bosch, incorporating six heat recovery steam boilers (HRSB), three UL-S series steam boilers, boiler house components and control technology. A total of up to 55 tonnes of steam per hour are available for brewing and cleaning processes. The steam generation process is highly efficient and saves costs and resources. 20 percent of the total steam demand is generated by the heat recovery boilers purely from the waste heat from generators, without using fuel. A heat recovery boiler can recover around 9.5 tonnes of waste heat per hour in a temperature band of up to 528 °C. This also increases the overall efficiency of the local electric power generation by virtue of the principle of combined heat and power. The UL-S steam boilers cover the additional steam demand. They are designed for three fuel types to ensure a high level of flexibility and a reliable supply. For even more flexibility, the steam boilers react to the typical load variations of the steam consumers, supplying constant steam quality for high efficiency.

Depending on the infrastructure available or planned on site, Bosch also provides solutions for the electrification of process heat generation. The ELSB electric steam boiler is completely electric and climate-neutral when using green power. A multivalent system with electrically heated boiler and existing steam boiler system is also a possible application. In addition, all industrial boilers from Bosch can be designed for use with alternative fuels, such as biogas and hydrogen, and many existing systems can be converted to such energy sources. Even a combination of different fuels or a hybrid boiler with green electricity are possible. "From major breweries to small drinks manufacturer, we help companies worldwide to generate process heat in a way that is energy-efficient, sustainable and future-proof," emphasises Daniel Gosse.



The heat recovery steam boilers from Bosch generate 20 percent of the steam demand at International Breweries Plc. using waste heat.



Electrical steam boiler system from Bosch with 100 percent green energy utilisation.

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