

Case study



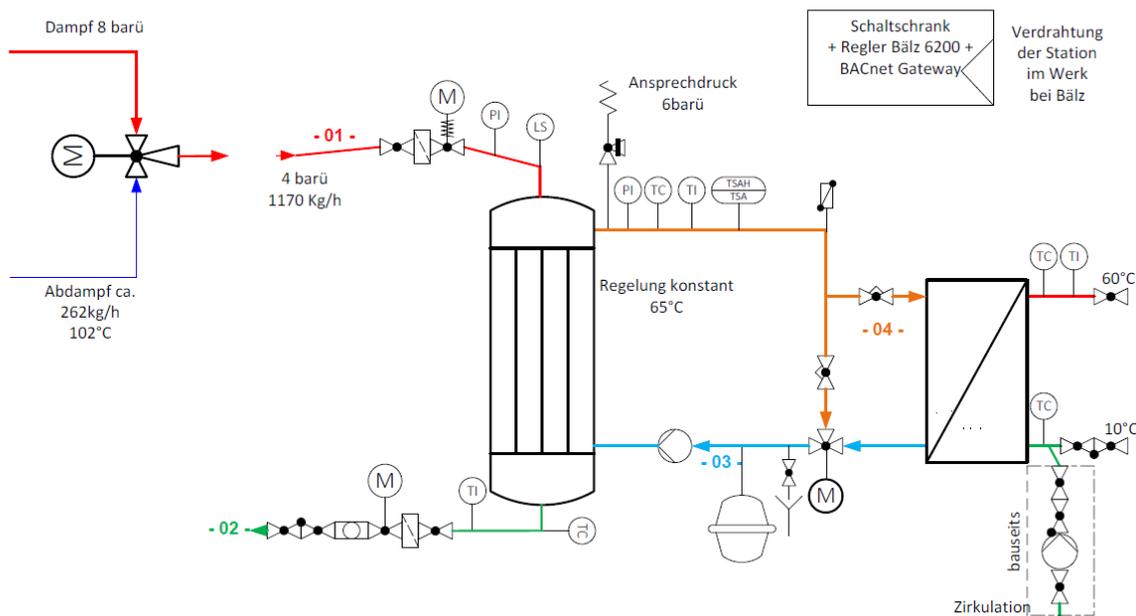
BAELZ PRODUCT: Steam jet pump 590 and Luxese for TWW
INDUSTRY: Power station
COMPANY: Electricity producer
COUNTRY: Germany, western region

INITIAL SITUATION

A leading electricity producer requires new clean water heating facilities for the washrooms. The building is supplied with steam via a central heating plant. Until now, the clean water at the site has been supplied conventionally via large storage tanks with steam lances. The decision was taken to use the clean water supply for the first time with steam/hot water solutions with condensate back-up control in future. So far, several steam/hot water solutions with condensate back-up control for the building heating have been installed, these forming the optimum basis for an economical steam/condensate circulation at the site. In addition, a steam jet pump is to be used upstream of the new steam/clean water heating facilities, this utilizing the flash steam from the condensate collecting vessel, the so-called vapor compression, besides the high-pressure steam.

TECHNICAL MODIFICATIONS

The flash steam that is continually routed into the open air via the roof was able to be reduced considerably by using the steam jet pump. The figure below shows the optimized hydraulics.

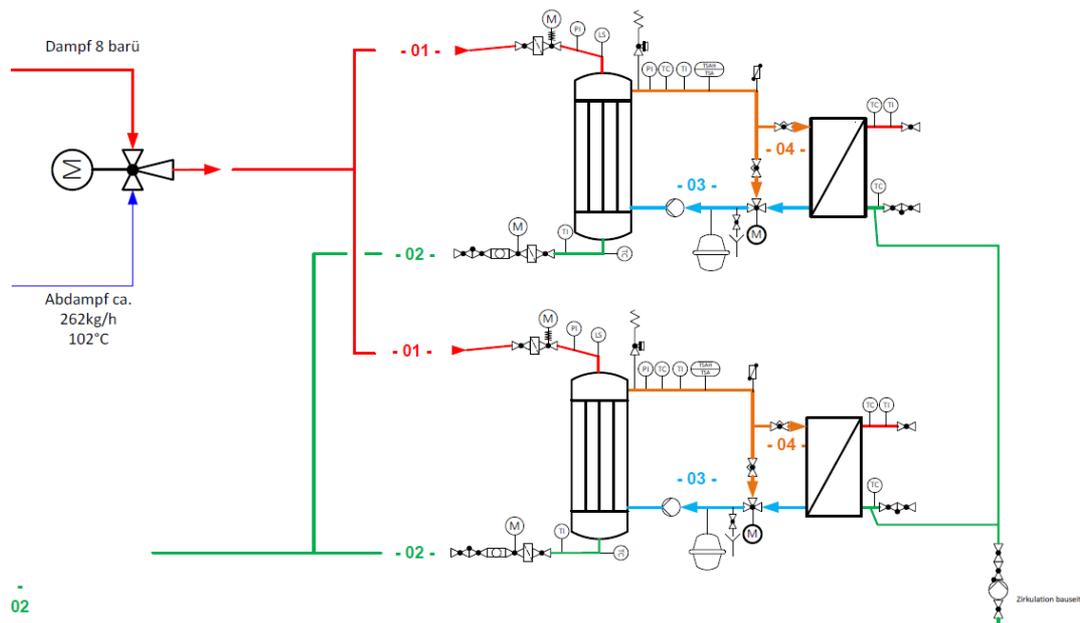


CS_steam_jet_pump_0002_en_UW

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SAVINGS/ECONOMIC EFFICIENCY

After the project had been up and running for a year, an analysis of the cost savings was conducted. Assuming that the operator has costs of 20 euros per tonne of steam and the clean water heating is in operation 8 hours a day for 358 days, with the jet pump utilizing 260 kg/h exhaust steam additionally for supply, a daily utilization of 2 tonnes exhaust steam can be realized. This results in an annual saving of around 15,000 euros in the production of steam or when heating clean water.



General overview of the technology

- easy installation
- high economic savings
- rapid return of investment
- efficient utilization of resources
- long service lives of the components