

Reference Sutter

The companies involved

Operator: Sutter GmbH, location Gau-Bickelheim

- ▶ Family business with around 900 employees
- ▶ Production focus: manufacturing of cooked cured products and boiled sausages for the retail industry
- ▶ High heat/steam demand for several production processes and food safety
- ▶ Introduction of an energy management system

Modernisation of the process heat supply

Switch to natural gas – installation of new burners – replacement of the control system

Implementation: Helmut Herbert GmbH & Co. KG



Reference Sutter

The project



Measures

- ▶ Switching from fuel oil to natural gas operation (dual fuel burners)
- ▶ Existing fuel oil supply as back-up, therefore the natural gas supplier waived the building cost subsidy
- ▶ Use of modern dual fuel burners with speed controlled fans and combustion controls (O₂ probe)
- ▶ Retrofit of a state-of-the-art control system

Motivation

- ▶ Analysis and evaluation of the savings potential in the factory as part of the introduction of a certified energy management
- ▶ High energy consumption identified within the process heat supply with three oil-fired steam boilers
- ▶ Foreseeable difficult spare parts supply for the existing Siemens control



Reference Sutter

The project

Controls

- ▶ Bosch boiler control (BCO) for a safe and efficient operation of the individual boilers
- ▶ Bosch system control (SCO) for intelligent controlling of the multi-boiler system and efficient operation of the water treatment
- ▶ Intuitive touchscreen control, condition monitoring

Control technology

- ▶ Bosch Master Energy Control (MEC) visualizes and saves the data for the energy management system
- ▶ Intuitive touchscreen control with customizable analysis and automated reporting
- ▶ Mirroring of the user interface on any authorized computer (user) within the company network
- ▶ Optional: fault reporting at any time via text messages



Boiler and system control with superordinate control Master Energy Control MEC

Superordinate control system MEC

- ▶ Visualization and analysis of data
- ▶ Easy consumption analysis
- ▶ Reports to the technical director
- ▶ Eligible energy management software*

Combustion control

O₂ probe reduces flue gas losses by 1 % and compensates fluctuations of environment and fuel

PLC based controls

- ▶ System control and control for each boiler
- ▶ Condition Monitoring
- ▶ Gentle, adaptive sequence control
- ▶ Water treatment control




Dual fuel firing (oil/gas)

with a high modulation range
Speed-controlled fans
for low electric power costs and quiet operation

*Listed by the Federal Office of Economics and Export Control

Reference Sutter

The result

- € Annual energy cost savings of around **250 000 euros**
-  Reduction of around **1 200 tons** of CO₂ emissions per year
-  Amortization period of the investment: approx. **three years**
-  **Further benefits:**
 - ▶ Increased competitiveness
 - ▶ Smooth operation with less material stress and reduced energy losses
 - ▶ Increase in the degree of automation
 - ▶ Easy consumption analysis



Christian Böhme, energy manager at Sutter:

“Prior to the modernization we had been supplied with around 30 000 l of light fuel oil – every week at another price. The switch to natural gas has improved our reliability of our energy cost planning.”