STEAM AUDIT – Austria, Food II

FACT SHEET

The company's approach to energy efficiency

The company attaches great importance to a sustainable production and the preservation of the environment. Therefore, the company has often invested in environmentally friendly technologies and renewable energy.

Steam system

The two steam generators have a nominal steam capacity of 8,85 t/h. Natural gas is used as fuel. Steam is generated at a temperature level of 173 °C and a pressure level of 8.5 bar. The recorded data show an average load of 35%. Most of the generated steam is used for production processes; the condensate return rate is 90%.

Steam system problems identified

The efficiency of the steam generation is about 70%. To improve this situation, steam generation should be re-installed since the operation of the two boilers, one of which can only be operated in partial load, is not optimal.
To avoid very high investments, measures can also be taken to improve the efficiency of the existing steam generators.

Proposed energy saving measure(s), investments, and expected results

Implementing a new efficient steam generator promises the highest energy savings with a reduction in energy demand of 929,000 kWh/a. Based on investment costs of 360,000 € and annual savings of 30,206 €, the static amortisation period is 11.9 years.
For the existing system a variable speed drive control for the fan motors should be implemented since these devices are mainly operating at partial load. Additionally, automatic desludging and automatic oxygen control of the exhaust gas are also recommended to improve the efficiency.

Achieved and/or expected non-energy benefits (NEBs) as a result of implemented and/or proposed measures and investments involved

Due to the proposed measure, further improvements, such as reduced emissions, reduced water consumption and increased security of supply, are surely expected. In addition, this project would further underline the company philosophy.

Involvement of internal stakeholders

Mr Ralf Freitag, being the person within the company responsible for steam plants, was the main contact for this project. The cooperation worked very well during the whole project thanks to Mr Freitag's personal high level of motivation.

Mohren Produktions KG
www.mohrenbrauerei.at

Austria

Brewery

Beer

120 employees

Total (Estimated) Investment

360,000 €

Total (Estimated) Savings

30,206 €/a

929,000 kWh/a

Non-Energy Benefits

Reduced water consumption

Increased security of supply

Reduction of emissions