

**Companies connection to energy efficiency**

The company is a participant of the long term agreements on energy saving that the sector has made with the Dutch government. The company agreed on 2% energy - efficiency improvement a year based on process-efficiency and chain-efficiency. The company has got a certified ISO 14001 system

**Steam system**

The nominal capacity of the steam system, which consists of two boilers, is about 12 t/h. The nominal steam pressure is 16 bar, but currently the maximum needed pressure level is 13 bar. Furthermore, steam is used at a lower pressure levels. The boilers use natural gas as fuel. The main consumers are the production of sauces and ketchup. 20% of the condensate returns.

**Steam system problems identified**

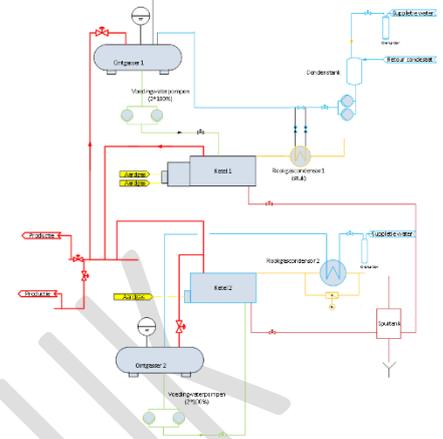
The old boiler needs to be replaced, some insulation needs to be fixed also and there are filters which are incorrectly installed. The steam system is in a good overall condition and several energy efficiency measures have already been implemented during the last years, for example, there is a O2 measuring system in the flue gases that reduces the air supply to the burners automatically.

**Proposed energy saving measure(s), investments, and expected results (in figures)** 1.New boiler, payback time > 6 year. 2. Further insulation, payback time < 2 years. 3.Replacement of safety valves (leakages), payback time < 5 years. 4. Reinstall filters, payback time< 0 years. 5. New water treatment (study). 6.New steam related procedures in management system within ISO 14001

**Implemented proposed energy saving measure(s), investments and results achieved (in figures)**  
The boiler has been replaced and has an overall operating efficiency improvement of 8%. The other projects reduce gas consumption with 6,5%. The overall energy consumption reduction is 2,270 MWh per year.

**Achieved and/or expected Non Energy Benefits (NEBs) as result of implemented and/or proposed measures and investments involved**  
Further insulation increases the security. All projects reduce the need for natural gas and so reducing the emission of CO2.

**Involvement of internal stakeholders**  
The risk-manager and the technical department are involved in the project and highly interested in the results.



The Netherlands

Fruit and vegetables

Sauces and Tomato ketchup

**Total (estimated) Investment**

€ 398.800

**Total (Estimated) Savings**

2,270 MWh/ yr

**Non Energy Benefits**

Reduction of natural gas demand

Lower CO2 emission

Higher security