STEAM AUDIT - Denmark, Hatting

FACTSHEET



Companies connection to energy efficiency

Hatting has been working on energy and environment for many years. Hatting works to target energy and production optimization.

Continuous energy ratios are calculated in relation to production.

Steam system

The nominal capacity of the steam system, which consists of two boilers, is about 1.6 t/h and 0.7 t/h. The nominal steam pressure is 1 bar. The boilers use nature gas as fuel. The main consumers are the prooving cabinets and hot water. Nearly nothing of the condensate returns from the consumers, because it is used to maintain the right humidity in the prooving cabinets.

Steam system problems identified

The steam systems is in good overall conditions and several efficiency measures have already been implemented during the last years for example they use the surplus heat from the air compressors to heat up the building instead of steam They have also build on an economizer to heat up the hot cleaning water. The production have been reduced and there for the boiler is too big now.

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

In connection with the mapping of the steam system, it was found that most of the steam is been used in heat exchanger for building heating. Since no steam is directly required for heating, this part can be converted into small gas. It is also possible to use high-pressured water atomization in the prooving cabinets to maintain the right humidity.

Implemented proposed energy saving measure(s), investments and results achieved (in figures)

The investment for the new smaller boilers and high pressured water atomization will cost approx. 100,000 € which leads to an energy saving of 1,193 MWh.

Achieved and/or expected Non Energy Benefits (NEBs) as result of implemented and/or proposed measures and investments involved

If they implement both projects, the entire steam system can be shut down and it will lead to a lower CO₂ emission and there will not be the cost of maintenance the boiler, chemicals, and salt to the water treatment system.

Involvement of internal stakeholders

The management of the company is highly interested in implementing measures to achieve cost-effective energy savings.



Hatting Bageri www.www.lantmannenunibake.com/da

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Food

Bread

Total (estimated) Investment

€ 100.000

Total (Estimated) Savings

€ 77,000 p/y 1,192 MWh p/y

Non Energy Benefits

Lower CO₂ emission

Lower maintenance cost

Lower chemicals and salt

consumptions



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