

The company's approach to energy efficiency and sustainability

The company has already implemented numerous energy saving projects over the last year, the main heat consumers are supplied by an efficient biomass boiler. Other heat consumers have already been switched over to direct heating. In addition, BRUCHA positively concluded the certification according to ISO 14001:2004 and, thereby, has taken another major step toward lasting environmental policy.

Steam system

The capacity of the steam boiler is 8 t/h. The fuel used for the burner of the steam production is oil. The nominal steam pressure is 12 bar, but steam is produced at a pressure level of 8 bar. On average, the system produces about 4–5 t of steam per hour. The steam is used for the production of expanded polystyrene (EPS) exclusively. For this process, as it uses the steam directly, no condensate returns to the system. The boiler is situated next to the production to reduce heat and pressure losses.

Steam system problems identified

For process reasons, there is no condensate return, therefore, the efficiency for preheating the feed water is very important.

Proposed energy saving measure

For a higher efficiency of the steam system, the consultant proposed to install a second economiser to preheat the fresh and cold feeding water. In addition, a combustion air preheating improves the efficiency of the boiler. In total, the measures lead to savings of about 150 MWh per year.

Implemented proposed energy saving measures, investments and results achieved

The investment costs for the implementation of the measures amount to 35,000 €. Taking the cost reduction of 10,000 € in consideration, the static amortisation period of this optimisation project is about 3.5 years.

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

Due to the higher efficiency, the projects lead to a lower demand of oil and this directly results in lower CO₂ emissions.

Involvement of internal stakeholders

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



BRUCHA Gesellschaft m.b.H.
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Austria

Special cooling and deep freezing constructions

500 employees

Total (Estimated) Investment
€ 35,000

Total (Estimated) Savings
150 MWh

Non-Energy Benefits
Reduced demand of oil
Lower CO₂ emission