

Company's connection to energy efficiency

This company uses the residual heat from the dye works wastewater whilst also regaining energy from the exhaust air. Furthermore they operate sedimentation tanks for the precipitation of residual dye from the wastewater. Careful handling and safe storage of less polluting chemicals ensures the best possible protection for the environment. The measures taken concerning noise reduction complete their efforts to reduce emissions to a minimum. Audits, as well as the annual certification in accordance with ISO 14001 support this company's ecological endeavours.

Steam system

The feed water is preheated via the economiser and fed to the boiler via the level control of the steam boiler as required. The steam boiler has a rated steam output of 12 tons of steam at max. 13 bar, but was modernized and reduced in 2007 due to the strong decline in steam demand. In operation, between 2 and 6 tons of steam per hour will be produced, which is fed into the steam distributor at a pressure of 8 bar. From the steam distribution this goes to the respective consumers, and if necessary to the condensate collection tank. The falling condensate at the steam distributor is in this case fed to the feedwater tank.

Steam system problems identified

A condensate return is currently available only for a few consumers. For many consumers it is evaporated directly, a return of the condensate is not possible. Other consumers are indirectly heated by steam, but are not connected to the condensate return. The steam system was designed for significantly higher performance and is therefore completely oversized for the current steam requirement. The operation and thus also the steam pipes is very extensive, which leads to high distribution losses.

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

- Extension of the existing condensate return could save about 246 MWh/a and 10.479 €/a; invest costs ca. 51.226 €
- Disassembly of unused piping and fittings could save about 11 MWh/a and 468 €/a, invest costs ca. 4.800 €
- Insulation of fittings could save about 35 MWh/a and 1.504 €/a, invest costs ca. 7.500 €
- Using Closing valves instead of control valves saves 221 MWh/a and 9.408 €/a, invest costs ca. 1 € (already implemented)

Expected Non Energy Benefits (NEBs) as result of proposed measures and investments involved

Due to the return of the condensate less fresh water must be used. At the same time, less wastewater is produced which means wastewater costs can be reduced. Additional NEB saving potential of over 1.800 € could be gained.

Germany

Textile manufacturer

Ca. 140 Employees

Total (estimated) Investment

63.537 €

Total (Estimated) Savings

21.859 €/a

513,8 MWh/a

Non Energy Benefits

e.g. Increased production

e.g. Better safety control

e.g. Improved position