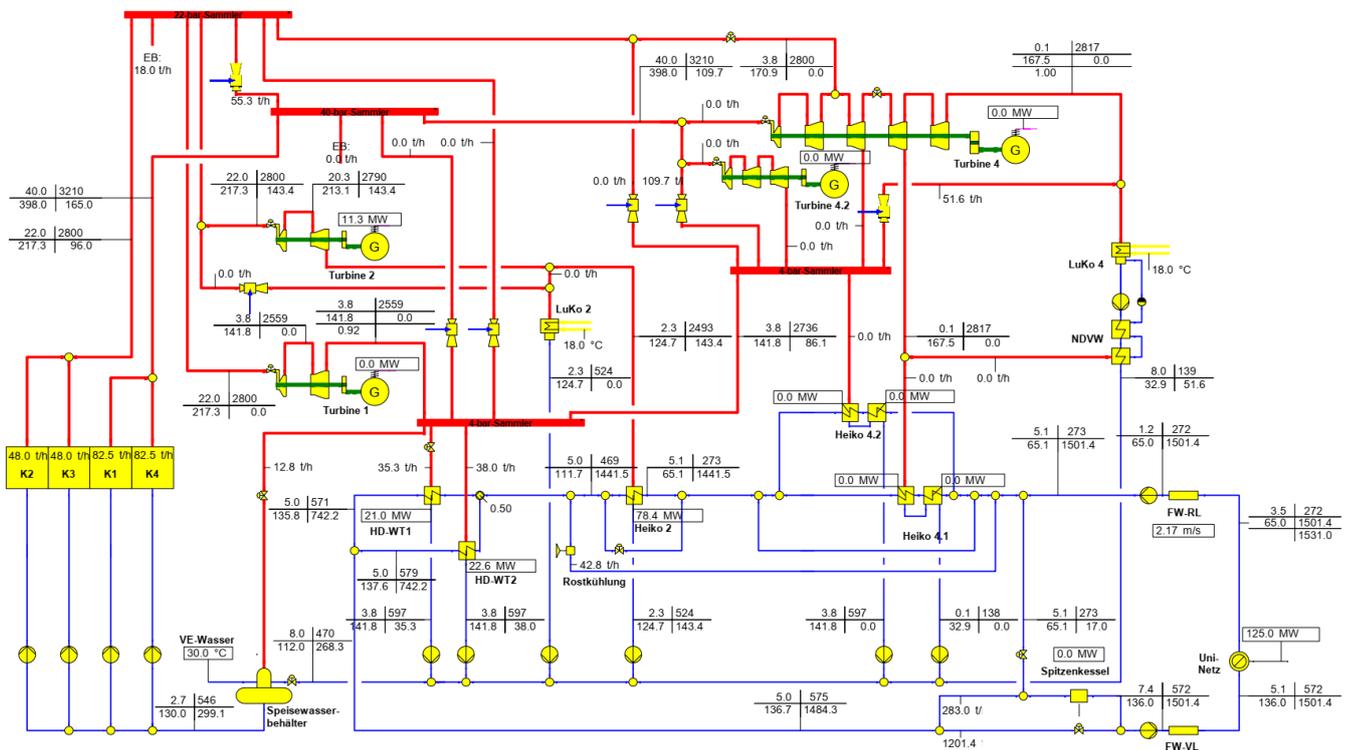


Client: Waste incineration plant MHKW Bremen
Project: Studies for refit of the district heat generation
Services: Preliminary planning



General

At the incineration plant MHKW Bremen heat is extracted and supplied to the University of Bremen through an existing district-heating pipe. It is also intended to supply district heat to the heating plant Vahr through an additional district-heating route that is currently being planned. The aim is to take heat from the incineration plant/university and feed into the "Ost" network. As part of the preliminary planning for the project, it was to be examined what thermal power in the region of more than 100 MW_{th} can be extracted from the incineration plant, and which measures are required for this.

A baseline study of the existing plant technology was first carried out for this. A model was then created for the water-steam cycle of the incineration plant, using Epsilon, simulating the three steam turbines, reducing stations as well as the heat exchangers and the peak-load boiler for the district-heating circuit of the incineration plant. The model was then extended

to include further components required to further increase the power. For each plant configuration, not only were the maximum outputs determined, but also the electrical and district-heating outputs at reduced operating conditions (e.g. during boiler or turbine overhauls).

The results of the load cases were compared to the annual curves to be anticipated for district-heating sales to determine the most cost-effective sizes for the apparatus to be replaced or renewed.

The necessary investment costs were calculated for possible expansion stages and summarized in a report.

Planning work

The planning work covered the preliminary planning.