

Plantware

Pipe Design for Heat Recovery at Waste Incineration Plant

Project Details

Project	Heat Recovery
Client	Vestforbrænding I/S
Built	Vestforbrænding I/S
Year	2006

PlantWare has designed the piping system for a heat recovery system along with the steel structures and pipe bridges to support it. The installation is placed at Vestforbrænding, the largest waste incineration plant in Denmark.

The heat pump system enables condensation of the flue gas via a scrubber system and thereby extracting almost all the energy from the flue gas. The temperature is raised on the water side to be used for district heating via the two sets of compressors. The compressor uses HP steam for regenerate the salt which the function is based upon.

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PlantWare Scope was

- HP Steam system
- Condensate system
- District heating from DN150 to DN600
- Heat transfer lines
- Internal pipe lines for the compressor

Engineering Scope consisted of

- Site measurements of building and existing installation
- Routing and arrangement based
- Pipe detail design - PED class I, II and III based on EN13480 with nozzle calculations, pipe flexibility analysis with ROHR2 etc.
- Structural steel design
- Steel detailing with bill of qualities, assembly detail, fabrication drawings etc.
- Piping support - fix points, support structures etc. including sizing/selection of spring and constant load hangers
- Pipe isometrics for fabrication

For all piping and structures fabrication drawings was generated from the AVEVA 3D PDMS model using automated steel detailing macros and ISO-DRAFT module for piping isometrics.