

Partner offer (competences/expertise)

At Rheologic we have experience with CFD (computational fluid dynamics) simulations with low temperature heat (i.e. waste heat) for example in data centers. We can include full thermodynamic effects of phase changes (moisture content, evaporation, condensation, ...) of water and also other arbitrary fluids allowing optimization of heat exchangers also with condensing fluids - examples:

<http://rheologic.net/en/heat-transfer-cfd-simulations>

With regards to mutualised energy services we implemented cooling solutions for data centers - joint use of chillers for the Austrian National Bank. In this project we predicted the temperature development in case an existing and operating chiller has to stand in for a failing one for a certain amount of time. This allows a reduction of backup chilling solutions and a more efficient cooling management in situations with varying heat load.

For the solution we implemented, the final deviation between simulation and a live test was an overall 0.2°C - a very exact prediction of our model! Details can be found here:

<http://rheologic.net/en/rheologic-sample-projects#OeNB>

http://rheologic.net/sites/default/files/pdf/oenb_sim_2014_en.pdf

Topics

EE-17-2016-2017:

Valorisation of waste heat in industrial systems

EE-18-2017:

Energy efficiency of industrial parks through energy cooperation and mutualised energy services

EE-20-2017:

Bringing to market more energy efficient and integrated data centres

Contact

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