

Thesis title:	Simulation-Based Assessment of Waste Heat Utilization Systems for a Mid-Sized Data Center in a University Campus
Author:	Bc. Vojtěch DVOŘÁK
Thesis type:	Master's thesis
Faculty:	Faculty of Mechanical Engineering
Department:	Department of Environmental Engineering
Thesis supervisor:	Prof. dr. ir. J. L. M. Hensen

The master thesis submitted by Mr. Vojtěch DVOŘÁK deals with waste heat utilization in a mid-sized data center (DC) located in the campus of Eindhoven University of Technology. For this, he developed a computational energy model of the DC and its cooling system. Using this model, he simulated and evaluated the potential for reduction of energy consumption and carbon emissions in different waste heat utilization system alternatives integrated with the existing large-scale aquifer thermal energy storage providing heating and cooling to the campus buildings.

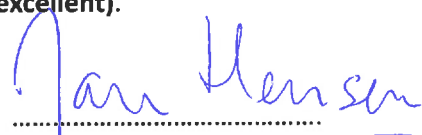
The student understands and can reproduce directly relevant theory at the level of MSc textbooks and scientific literature. He has independently and very skillfully applied theory to the performed research. He is able to use techniques for interpretation and verification in a mechanical way. His conclusions are based on results but are not expanded to a higher level. The results can be communicated without hesitation to the outside world. The work has the potential to contribute to a conference paper.

Mr. Vojtěch DVOŘÁK has sufficient critical attitude towards his own results, literature and specialists. The report required only one or two iterations and limited input from the (principal) supervisor(s). He has had at least one original contribution to the project not initiated or thought of by the supervisor. The student took initiative at multiple occasions to give his own input for the research. He showed very good time planning, because the nominal project time was not exceeded. He was "project manager" of the research project and did not waste the available resources nor time.

In my opinion, the thesis fulfills the criteria for the Master's degree in Mechanical Engineering at CTU in Prague. I suggest the overall evaluation grade for the thesis as **A (excellent)**.

Date: 18 August 2017

Signature:


Prof. dr. ir. J. L. M. Hensen