



Development adapting large-scale heat exchanger models for large-scale heat pump systems



Motivation

- Increasing share of renewables and district heating
- Large-scale heat pumps are key components
- Sewage water and seawater are promising heat sources, but associated with fouling



Conditions

- Master's project (Possible to adjust to Bachelor's)
- Experienced supervisors at DTI
- Involvement in cutting-edge R&D projects
- Collaboration with manufacturers and customers possible



Objectives

- Modelling of fouling process and linking it to measurable parameters
- Implementation of adapting models
- Validation with measurements
- Optimization of cleaning schedule



Methods

- Numerical modelling and optimization
- Model reduction
- Control optimization