



Alfa Laval in Lund is looking for two M.Sc. students

Master's thesis – CFD Simulation in OpenFOAM™

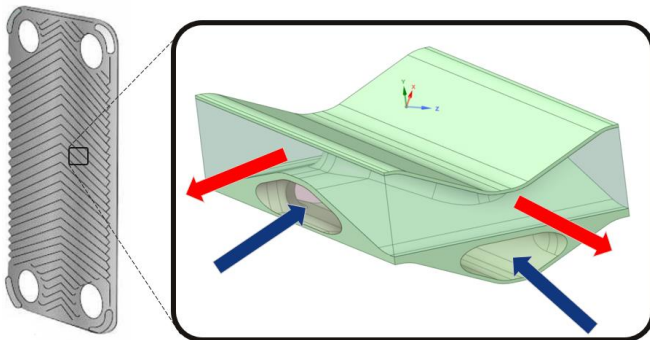
We create better everyday conditions for people. We do this by contributing to a more sustainable future through engineering innovation. We love what we do and we're good at it. But now we want to be even better! We're looking for two M.Sc. thesis students to the Alfa Laval Energy Division in Lund.

Who are we?

Alfa Laval is a global company with three key product areas: heat transfer, separation, and fluid handling. We have sales in more than 100 countries and in 2022 the order intake was about 5 500 million euro. The number of employees is about 20 000. The head office is in Lund, Sweden, where a major part of the research and development of plate heat exchangers reside.

About the job

A plate heat exchanger (PHE) consists of a stack of corrugated plates, often with a periodic structure, that facilitates efficient heat transfer between hot and cold fluids. Alfa Laval uses Computational Fluid Dynamics (CFD) in research to better understand the flow dynamics in different plate channels. The objective of this Master's thesis is to develop and implement thermal boundary conditions for periodic Conjugate Heat Transfer (CHT) simulations using OpenFOAM™.



The project includes:

- Theoretical evaluation of periodic thermal boundary conditions using an in-house solver in OpenFOAM 7™.
- Development of a computational framework for one-phase Large Eddy Simulation (LES) of convection and conduction in PHEs based on existing geometry.
- If required, verify thermal performance with results from literature or tests.

Who are you?

We look for two analytical engineering students with an interest in computational fluid dynamics. Preferably, one or both students have studied courses within CFD and used OpenFOAM™ previously.

For more information about the project

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This master thesis is planned to start in spring 2024. Please apply as soon as possible.

Are you
curious?

