MASTER THESIS OFFER: FURNACE SIMULATION

Problem Description

- All Hilti fire protection products have to pass internal and external fire tests.
- The furnace is heated according to the logarithmic UTC.
- A sound knowledge about the conditions inside the respective test furnace is essential. Therefore, the situation in the furnace during the test shall be simulated by CFD.

Objectives & Tasks

- The aim is to understand the influence of position and number of burners on velocity, temperature and pressure field in furnace. Besides, the influence of the walls – heat up in intial face and stabilization by radiation in the later phase – shall be investigated.
- The task is to setup a CFD model with OpenFOAM for a test furnace and perform combustion computations to get the temperature and velocity profile in the furnace.
- The master student should be interested in CFD and willing to deal with an open source code. Knowledge of C++ is an advantage.

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