Technical Student Programme: February 2019 – January 2020

Author: Michał Wilczek
Supervisor: Michał Maciejewski

Lodz University of Technology

CERN STEAM

ARTS ET MÉTIERS ParisTech

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Academic Background

Lodz University of Technology

Currently: M.Sc. in Advanced Mechanical Engineering

B.Sc. in Mechanical Engineering and
Applied Computer Science

Engineer's double Degree programme
in General Engineering; 2-year stay in France

Master thesis

Scientific Projects

Bachelor thesis: Design of a modular apparatus for the production of nitric acid in electric discharge phenomena

Lodz University of Technology →

Fluid-Structure Interaction modeling to estimate the lifetime of a centrifugal compressor

ARTS ET MÉTIERS ParisTech →

Experimental and theoretical modal analysis of the Solar Impulse plane model in scale

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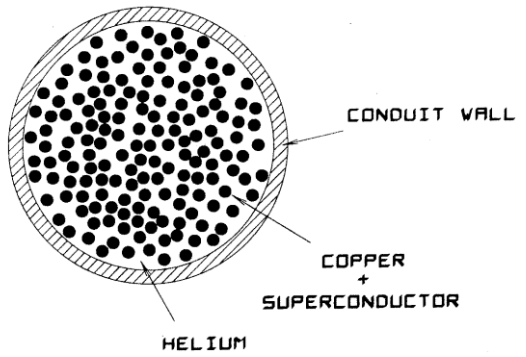
Simulation of a mechanical response to unbalanced currents in the 11T magnet protected by CLIQ system:
→ One-way coupling of ANSYS with Comsol modules via MpCCI interface
→ Project carried out in the STEAM

Project at CERN

- **Warm up task:** automatic stress data extraction from ANSYS for further analysis of critical parameters during quench in Nb_3Sn

MIT thesis – Quench Modelling in Cable-In-Conduit Superconducting Magnets



Based on the implementation at iter

- make 1D heat propagation models
- make 2D heat propagation models
- make 3D (extruded 2D) heat propagation models
- couple 2D models from Lucas Brouwer from Berkeley National Laboratory to 3D heat propagation models
- validate against exsiting measurements

- Rerun standalone 2D ANSYS models from Lucas Brouwer from Berkeley National Laboratory
- Automatic model generation of different model types (starting from existing tests)

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