

ABB Power Systems - FACTS

Magnetic field optimization and development

ABB is a global leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. ABB AB consists of five divisions, Power Products, Power Systems, Discrete Automation and Motion, Low Voltage Products and Process Automation. The ABB Group of companies operates in around 100 countries and employs about 120,000 people.

Thesis Background

FACTS (Flexible AC Transmissions) within Power Systems provide reactive effect compensation of shunt and serial compensation plants for power transmission owners and power plant owners within industry. Almost 100% of the plants are exported. In order to deliver quality, a number of advanced calculations need to be performed – and exported between different software.

Thesis Goal

The goal of the thesis is divided – one aim is to develop a basis for decision on how a magnetic field calculation's model in 3D should be created in SolidWorks for easy exportation to COMSOL; the other aim is to simplify the 2D based magnetic field calculations. A manual for each application is to be created in both Swedish and English. The thesis will be presented as a report in English, and will hold what norms and in-data have been used as well as the result.

Requested Competence

- B.Sc or M.Sc in Electrical Power Engineering
- Good knowledge 3D-CAD, such as SolidWorks or equaling software
- Experience from constructing large plants within Power Systems and business is advantageous
- Keen interest in electromechanical construction
- You are also committed, collaborative and possess a great deal of stamina

Required Scope: 2*30 ECTS (D-Level) or 2*15 ECTS (C-level)

Last Day to Apply: 2010.03.14

Register your CV in our Master Thesis database in the Student page at www.abb.se/jobb. Tag your CV with the exact text "ABB MT 07" in the free text field "Freely describe yourself ..." at the end of the application form. Please enclose CV, cover letter and grades.

Preferred Start Date: Mid 2010



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