

ABB Machines/DC Motors

Renewable energy sources powering DC motors

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

The Business Unit Machines/DC Motors in Västerås has a global responsibility for the sales, production and development of DC Motors (Power 30kW to 1400kW) within ABB. Several large development projects are currently ongoing – aimed to change the DC motor technology for the future.

Thesis Goal

The goal of the thesis is divided into four parts. The first is to analyze and compare different technologies for powering motors, including life cycle cost analysis. The second is to analyze and suggest solutions to the difficulties involved in using renewable energy sources for powering DC motors. The third is to construct a system using a renewable energy source powering a DC motor. This includes drawings, life cycle cost calculations and possible computer code. The fourth and last is to suggest placement and application for a prototype system. Your thesis will be part of the input for decisions on the next step of production of a prototype system.

Requested Competence

- M.Sc in Electrical Engineering, Mechatronics or similar
- Knowledge of MatLab, SimuLink and construction in CAD
- Good knowledge of Swedish and English
- You are committed, collaborative, creative and independent

Required Scope: 30 ECTS (D-Level)

Last Day to Apply: 2010.04.30

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 08" 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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