

Bachelor or Master Thesis

Modelling Current Transformers

Motivation

Current transformers (CTs) are used in our high-voltage distribution and transmission grid for monitoring, billing and protection purposes. To investigate the effects of distributed energy resources, such as wind turbines, photovoltaic systems or even solar storms, an electromagnetic model of CTs should be developed within in the thesis and validated with field and laboratory measurements.



- Identify significant CT model parameters
- Define a measurement to capture the CT's hysteresis characteristic
- Possible advantage of the hysteresis model versus model with saturation characteristic

Tasks

- Literature study and benchmark of available electromagnetic models
- CT model parametrization with measurement and design data
- Model validation with laboratory and field measurements

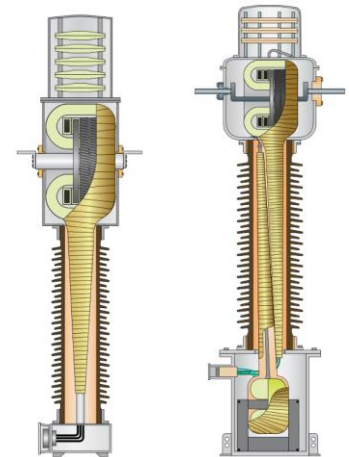


ABB Instrument Transformer Application Guide, 2015

Further Information

Start: today ;)

Thesis: LaTeX or Word

Language: German or English

Workplace: TU Graz

Do not hesitate to contact us if you have any questions. We will adjust the thesis scope according to your personal interest and degree (Bachelor/Master thesis).

Contact

Dennis Albert

Institute of Electrical Power System
Graz University of Technology

OMICRON electronics GmbH
Oberes Ried 1, Klaus

Tel.: +43 (0) 316 873 7568
Mail: dennis.albert@tugraz.at

Nicolai Schwartze

Institute of Automation and Control
Graz University of Technology

OMICRON electronics GmbH
Oberes Ried 1, Klaus

Tel.: +43 59495 2310
Mail: nicolai.schwartze@tugraz.at