

Master Thesis

Analysis of switching voltages of a 110 kV circuit breaker

Motivation

In October last year extensive switching and short-circuit tests were carried out at the Hessenberg substation. In the course of these experiments, high-resolution measurements of switching operations of 110 kV circuit breakers were recorded, and the configuration of the system at the time of the measurements is also well known. Overall, it is thus possible to reconstruct the configuration in a transient calculation program, to select suitable models and to determine the essential influencing factors.

Research issues

The system configuration used during measurements must be simulated in the EMTP-RV software and the simulation results compared with the measurement results. Particular attention should be paid to the extent to which the use of standard models or benchmarks for the parameters provide realistic results.

Procedure/Methodology/Task definition

- Analysis of the measurement data and selection of suitable measurement series for modelling
- Compilation of the parameters used
- Development of a simulation model in the software EMTP-RV
- Comparison of the simulation results with the existing blade series as well as identification of the most important influencing factors (model parameters)

Organizational issues

Begin immediately

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