



OTTO VON GUERICKE
UNIVERSITÄT
MAGDEBURG



FAKULTÄT FÜR ELEKTROTECHNIK
UND INFORMATIONSTECHNIK



LENA

Master thesis/Bachelor thesis/Non-Technical Project

for Ms./Mr. xx xx

Topic: Topic from the field of partial discharge research

Task:

The high security of supply of our electrical energy network depends to a large extent on the reliability of the electrical equipment involved. This requires the perfect condition of the dielectric insulation of all power cables, overhead lines, transformers, etc., which must withstand the high-voltage stresses at all times. Any insulation fault can lead to supply failures and major economic damage.

Fatal insulation faults rarely occur suddenly, but develop. During this development, so-called partial discharges often occur. Consequently, to prevent serious insulation faults, the equipment can be monitored for these partial discharges. If partial discharges occur during a measurement, they are an indicator of incipient insulation defects. With the help of permanent partial discharge monitoring of the electrical equipment, a condition-based maintenance strategy could be introduced in the future. Today, however, partial discharge measurement is still a subject of research.

The LENA chair is currently conducting research on partial discharge detection with a focus on medium-voltage power cables. This research regularly results in interesting research topics that students can work on as part of their Master/Bachelor thesis or Non-Technical Project. If you are interested, please contact Mr. Martin Fritsch.

The study has to cover the following points::

- Literature research ...
- Documentation of the results

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