



Power Transformer Condition Assessment

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Message from the Guest Editor

Dear colleagues,

The reliability of an electrical power system depends on the performance and availability of its components, such as power transformers. Due to the increasing age of the transformer population, condition assessment and thus onsite diagnostics are important issues to secure the reliable operation of electrical power systems. During the last decades, major works have been being carried out for the development of reliable and accurate condition assessment techniques. Offline methods require disconnecting the transformer from the power network and are mainly used during scheduled inspections or when transformer failure is already suspected. In comparison to this, online methods are used during the operation and offer a possibility to record the condition under realistic operating conditions. Monitoring involves the continuous application of online measurement techniques, which allows trending and the early detection of an oncoming fault by the automatic evaluation of these data. The applicability of the different condition assessment techniques will be discussed in this Special Issue.

- failure investigation and statistics
- partial discharge diagnosis
- frequency response analysis
- dielectric response measurement
- dissolved gas analysis
- the use of chemical markers in transformer oil insulation
- dynamic thermal rating
- transformer health indices
- post-mortem analysis





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Message from the Editor-in-Chief

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