



SPTS 2019: Overall Transformer Insulation Diagnostics: Field and Laboratory Approach

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Transformer manufacturers working together with insulation material suppliers aim to deliver the most reliable and suitable product for the specific application where a power transformer will reside within the power system electrical infrastructure. In order to accomplish this complex task, a sequence of procedures has been put in place to assure quality of the manufacturing process and assembly of every single component.

In order to maintain a reliable operation, asset managers assign on-line and off-line testing procedures to evaluate the condition of power transformers in the field. It is so critical and important to understand the information that can be acquired in the field by off-line testing, and to correlate this information with laboratory analysis. The application of DC and AC diagnostic techniques in the field are well described in the first part of the seminar. Attendees will be able to review latest development in Power Factor Testing and Dielectric Frequency Response.

Because the opportunity to de-energize a power transformer is not a simple task and not often to happen, the second part of this seminar is focused on routine laboratory analysis of liquid insulation. Oil sampling practices, key laboratory tests performed by specialized personnel are used for overall condition assessment of the transformer. A brief but clear description of the importance of each of these laboratory tests in the context of this seminar.

The information is of great importance for asset managers, manufacturing OEM's, field operations staff, testing service companies and other interested parties. The seminar follows major national and international standards including ASTM, IEEE and NETA.

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