

FEATURE ARTICLES

8 Electrolytic Capacitors From the Postwar Period to the Present

Jens Both

This article is the last of three articles dealing with the development of aluminum electrolytic capacitors and is a good example of the fact that even the simplest device can become complicated given 120 years of evolution.

27 Challenges in Calibration of the Measurement of Partial Discharges at Ultrahigh Frequencies in Power Transformers

Asghar Akbari, Peter Werle, Mohammad Akbari, and Hasan Reza Mirzaei

This article describes the significant challenges and the problem of calibrating the ultrahigh frequency partial discharge measurement method for power transformers and clarifies the complexities theoretically and experimentally.

35 Early Prediction of Surge Arrester Failures by Dielectric Characterization

Welson Bassi and Hédio Tatizawa

This article describes a methodology that is based on measurements of polarization and depolarization currents that help in anticipating catastrophic failures of surge arresters.

43 Oxidation Stability Enhancement of a Blend of Mineral and Synthetic Ester Oils

U. Mohan Rao, Yog Raj Sood, and Raj Kumar Jarial

The present article on mixtures of mineral and ester oils presents an attempt to lower the cost of transformer dielectric fluid having improved oxidation stability with good thermal performance.

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48 An Overview on the Current Status of Partial Discharge Measurements on AC High Voltage Cable Accessories

Alexander Eigner and Kay Rethmeier

The article reviews the fundamental aspects of partial discharge and its measurement on high voltage power cable accessories, showing the results of typical measurements, and discusses its consequences in operation.

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