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#### FEATURE ARTICLES

### 7 Health Indexes for Power Transformers:A Case Study

Félix Ortiz, Inmaculada Fernández, Alfredo Ortiz, Carlos J. Renedo, Fernando Delgado, and Cristina Fernández. It seems essential that a health index for a power transformer should take into account the age of the transformer and its loading in service.

## 18 State of the Art in Insulation of Gas Insulated Substations: Main Issues, Achievements, and Trends

*Giovanni Mazzanti, Giovanni Stomeo, and Stefano Mancini*The main issues, achievements, and trends over the last four decades in research and development in the insulation of gas insulated substations are discussed.

## 32 Impulse Voltage Distribution and Frequency Response of Intershield Windings

*Mehdi Bagheri, B. T. Phung, and Mohammad Salay Naderi* In transformers with intershield windings, inserting shield turns between winding conductors increases the series capacitance, and results in a more linear impulse voltage distribution and fewer oscillations in the frequency response.

# 41 Partial Discharge Detection in Medium Voltage and High Voltage Cables: Maximum Distance for Detection, Length of Cable, and Some Answers

Gian Carlo Montanari

This article provides a simple background to clarify the problem of detection distance for partial discharge occurring in cable systems, presenting models, simulations, and measurements, which could help unravel this complex matter.

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