ACCEPTED ABSTRACTS

TOPIC: MATERIALS, COMPONENTS AND NEW TECHNOLOGIES

Paper Bulging in Conductors for Power Transformer application

Cantini, Lorenzo; Palermo, Giacomo; Pavanello, Paolo; Bustreo, Gianluca
Hitachi Energy, Italy

Considerations on transformer life determined by deterioration of insulating structure materials

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Repeated Flashover Test: Influencing Parameter Analysis

Ziger, Igor (1); Nenadic, Marijana (1); Koprivec, Kresimir (1); Perkovic, Marijan (2); Jurisic, Bruno (2); Zupan, Tomislav (3)
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Arresting of oil leakage in different locations of Transformers/Reactor using thrifty techniques - Case study

BEHARA, SIVA; KUMAR, NAVEEN
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Enhancement of Tan-delta values of Resin impregnated paper (RIP) Transformer bushing by employing various techniques - Case study

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Voltage Transformer Accuracy Performance Calculation Methods

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How insulating liquid constitution influences test methods

Atanasova Hoehlein, Ivanka
Siemens-Energy, Germany

Reference Temperature Challenges in Transformers with Alternative Insulation and Cooling Systems

Rahmbeksch, Mahdi (1); Duart, Jean-Claude (2); Szewczyk, Radoslaw (3)
1: Enercon; 2: DuPont Switzerland; 3: DuPont Polska

Use of re-refined oils in new transformers - pioneering project in Spain

Martinez, Miguel (1); Guimarães, João (2); Campelo, Hugo (3)
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Use of machine learning to calculate the compressed height of power transformers windings

Štrac, Leonardo (1); Toscano de Jesus, Carolina (2); Fernandes Ribeiro, Diogo (2); Fabac, Davor (1)
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Transient Stress on Instrument Transformers in Couplings of Substation Busbars

Pirker, Alexander (1); Albert, Dennis (2); Belavić, Fredi (3)
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Advanced Evaluation of Natural Ester Liquids and Insulation Paper Aging under Elevated Temperatures

Mihajlovic, Draginja (1); Gamil, Ahmed (2); Vasovic, Valentina (1); Lukic, Jelena (1)
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Impact of circuit breakers on VTs, SSVTs and small power transformers: FTO ad VFTO analysis, methods and equipment for on-site measurement and laboratory testing

Roman, Zoltan; Lagos, Fernando
GE Vernova, United States of America

Challenges regarding Factory Acceptance Test of large unit of Variable Shunt Reactor

Perunicic, Branko; Markovic, Marko; Raletic, Goran; Vucinic, Nebojsa
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Internal Fault Testing at the Voltage Part of a Combined Power Voltage Transformer

Nenadić, Marijana; Žiger, Igor; Crnković, Ivan; Brezak, Danijel
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Analytical modeling of oil circulation and nanoparticle impact on transformer temperature rise

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Nonlinear Time History Seismic Analysis of Capacitor Voltage Transformers: Shake Table Validation

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TOPIC: TRANSFORMER LIFE MANAGEMENT

Silver Sulfide-Induced Failure of a Power Transformer; A Root Cause Case Study Challenging Routine Standard Boundaries

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Mobarakeh Steel Co, Iran, Islamic Republic of

Online centralized supervision of distributing transformers

Gil, Wies?aw (1); Andrzejewski, Marek (1); Gro?ski, Mariusz (2)
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Non-standard, high frequency power system transients

Rahimpour, Ebrahim (1); Portillo, Alvaro (2); Jurisic, Bruno (3)
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Two-dimensional approach for condition assessment of dry-type transformers

Peters, Lando; Geiss, Felix
Maschinenfabrik Reinhausen GmbH, Germany

Smarter Transformers, Stronger Grid: POWERGRID’s Digital Condition Monitoring Journey

Agrawal, Gunjan
Power Grid Corporation of India Limited, India

Experience with Remote Service Solutions for Transformer Asset Management

Niedermeier, Robert (1); Ostroznik, Simon (2); Lohr, Michael (1)
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Real-TIme Monitoring of Station Service Voltage Transformer (SSVT)

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Smart Bushing Surveillance for a Safer Power Grid

Radecic, Iva (1); Jurisic, Bruno (1); Ivanovic, Ivana (1); Jerbic, Vedran (1); Perkovic, Marijan (1); Filipovic-Grcic, Dalibor (1); Schönberger, Marin (2)
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Challenges in Temperature Rise Testing of Station Service Voltage Transformers with Medium-Voltage Secondary Windings

Ivankic, Josip; Ziger, Igor; Brezak, Danijel
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Thermal Fault Identification in Transformer Bushings Using Online Monitoring and Offline Testing

Stagni, Stefano; Jacob, Nathan; Golovan, Dimytro
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Direct Temperature Measurement Techniques for Heat Run Test of Dry-Type Transformers

Wang, Chunping (1); Jin, Cheng (1); Al Abadi, Ali (2)
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Resilience through Repair: Enhancing Grid Reliability via On-Site Restoration of EHV Transformers and Reactors

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Reinventing BDV Testing: Multi-Parameter Insights for Transformer Risk Assessment

Grisaru, Marius (1); Gurin, Vitaly (2)
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Nonlinear Aging Behavior of Power Transformers under Increasing Load

Selzer, Silas (1); Bäcker, Niklas (1); Zdrallek, Markus (1); Maurer, Korbinian (2); Lindl, Karlheinz (2)
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Monitoring Principles of OLTCs in Power Transformers

Saveliev, Anatoli (1); Schröder, Anna (1); Kurz, Andreas (2)
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New Approach for differentiated Health Index for Substation Assets

Masmeier, Philipp; Dr. Johannes, Kreling; Kurz, Dr. Andreas
Messko GmbH, Germany

Analysis of temperature measurement systems of power transformers in the transmission grid

Hillberger, Manuel; Belavić, Fredi
Austrian Power Grid AG, Austria

Sprayed Metal for Effecting Leaking Transformer Repairs (SMELTeR)

Shaban, Muhammad
National Grid, United Kingdom

Evaluating DP-furan models to standardize furan-based assessment of transformer cellulose degradation

Đurina, Vedran; Vrsaljko, Dijana; Haramija, Veronika
KONČAR - Electrical Engineering Institute Ltd.

Influence of background noise on noise measurement accuracy of reactor energized by test transformer

Novosel, Janko; Dorešić, Matej; Telalović, Igor; Švarc, Davor; Kordić, Hrvoje
Končar Energetski Transformatori d.o.o., Croatia

Life Cycle Assessment of End-of-Life Phase in Transformer Sustainability

Declercq, Jan (1); Xu, Hang (2); Margot, Myles (3); Gonzales, Diana (4); Den Breejen, Joris (5); Wahis, Geraldine (6); Perrier, Christophe (7); Dukic, Milica (8); Schneider, Thomas (9)
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Artificial Intelligence and Classical Methods in DGA Interpretation - Use Case on a Real Transformer Defect

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Identification of Electrical Faults in a Transformer Winding using Unsupervised Dimensionality Reduction and Classification Algorithms

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High Voltage Bushings differences between on site tests compared to Factory Acceptance Tests

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Analytical Evaluation of Inductive Transformers During Line Discharge

Grđan, Andrea (1); Žiger, Igor (1); Hanić, Zlatko (2)
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Cold Start Approval of Natural Ester Liquid Filled Power Transformer

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Extracting Key Thermal Parameters Beyond Top Oil and Average Winding Temperature Rise from Standard Heat Run Test

Al Abadi, Ali (1); Wu, Wei (2)
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Additives and Oxidation in Ester-Based Insulating Liquids - Requirements and Analysis

Burk, Griffin (1); Casserly, Ed (1); Pahlavanpour, Bruce (2)
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A Techno Economic Model for Evaluating Low Loss Power Transformers

Keitoue, Samir; Pavičić, Tomislav
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Full Scale Internal Arcing Test in 60MVA Power Transformer: Test Results Analysis and Simulation

Padmanaban, Ashwin; Hamoir, Didier; Elkarii, Marwane
SERGI Transformer Protector Corp, France

Methanol analysis as transformer winding paper ageing marker: Correlation model based on post-mortem transformer dismantling

Eeckhoudt, Steve; Autru, Stijn; Vermeersch, Marnix
Key Expert ENGIE, France

FORMATION AND REMOVAL OF SILVER SULPHIDE ON OLTC CONTACTS: FIELD INVESTIGATIONS, PRACTICAL APPROACHES AND MAINTENANCE PERSPECTIVE

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DC bias currents in HVDC transformers

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Hitachi Energy, Sweden

Moisture Associated Dielectric Characteristics of Synthetic Ester-Filled Transformers Under Variable Load Conditions

Al Abadi, Ali; Garg, Hemanshul; Woyna, Irene
HITACHI Energy Germany

Experimental Evaluation of Magnetically Induced Losses Based on Temperature Measurements

Jurković, Zvonimir (1); Trkulja, Bojan (2); Petrović, Karlo (1); Jurišić Bruno (1); Jurković, Mario (3)
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Dynamic Transformer Ratings - Concepts, Standards, and Applications

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Forecasting dissolved gas analysis in power transformers using machine learning approaches

Đurina, Vedran (1); Cindrić, Vilko (1); Schönberger, Marin (2)
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Interaction of Power Transformers and Circuit Breakers at 145 kV: A Benchmark between Vacuum and SF6 Switching Technology

Wendlinger, Tobias (1); Bauer, Michael (2); Manthe, Thomas (2); Weisker, Jan (3); Giere, Stefan (3)
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Interaction of Power Transformers and 145 kV GIS Disconnectors: Experimental Study on the Propagation of Very Fast Transient Overvoltages

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TOPIC: NUMERICAL MODELING

Advanced Scalable WebApp Approach for Automated Simulation of Transformer Components Using Python

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Analyzing the Effects of Nonstandard Overvoltages on the Internal Electrical Stresses along the Transformer Windings

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Numerical Vibroacoustic Analysis of a Large Transformer Tank including Structural and Noise Optimization Options Review

GILLET, Max (1); BOSNJAK, Bruno (1); LANDES, Hermann (2); KEWAT, Neeraj (1)
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Experimental validation of the T-clamp compact pressure validation

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Thermo-Hydraulic Network Models: Accuracy and Performance under Operational Scenarios

Raith, Johannes (1); Picher, Patrick (2)
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Numerical and Experimental Analysis of Random Fatigue of Welded Connections Based on the Dirlik Method

de Mercato, Luigi (1); Vannicola, Sauro (1); Nowak, Tomasz (2); Osika, Mariusz (2)
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An Investigation on the effect of frequency dependence inductance calculation on high frequency modeling of transformer winding

Eslamian, Morteza (1); Rahimpour, Ebrahim (2); Sethi, Kabir (1)
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Seismic Stability of the Technical System Cast Resin Transformer

Kroták, Stanislav (1); Kress, Denis (1); Svoboda, Michal (2); Hlaváč, Jan (3)
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Design of transformers for very fast transient overvoltages

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Empirical Representation of Transformer Branch Impedance Frequency Dependency

Gustavsen, Bjørn (1); Oliveira, Luiz (2); Portillo, Alvaro (3); Portillo, Federico (3)
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ANSYS Automation for Deterministic Fatigue analysis of a Dry Type Transformer for Wind Power

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AI Solutions for Transformer Tank Cover Optimization

Lee, Walter; Gupta, Rajeev; Boroomand, Tirdad; Pattyson, Gary
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The Abilities of TDSF and FDSF in Analyzing Voltage Distribution in Different Types of Disc Windings of Power Transformers

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Analysis of Power Transformer Overvoltages due to Circuit Breaker Switching Transients through Detailed Wideband Modelling

Behdani, Behzad; Nasirpour, Farzad; Ghaffarian Niasar, Mohamad; Popov, Marjan
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Influence of Iron Core Modelling on Transient Overvoltages in Zig-Zag Connected Grounding Transformers

Jurković, Zvonimir (1); Perković, Marijan (1); Jurišić, Bruno (1); Marković, Mladen (2)
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GEOMAGNETICALLY INDUCED CURRENTS (GIC) AND INFLUENCE ON POWER TRANSFORMER SATURATION

Gloc, Antonio (1); Jurišić, Bruno (2); Filipović-Grčić, Božidar (3)
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Numerical Modeling and Direct Solver Development for Calculation of Power Transformer Core Clamping System Assembly

Ruganec, Davor; Barišić, Pavao
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Numerical Analysis of Clamping Element Pressure on Power Transformer Core Sheets

Leljak, Dalibor; Barišić, Pavao
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Automated transient acquisition and analysis system for standard and non-standard transient overvoltages

Pohovski, Toni; Razum, Filip
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The Impact of New Liquid Dielectric in Power Transformer on the Location and Detection of Partial Discharge Using UHF Sensors

Dukanac, Djordje
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Predicting Transformer Resonance and Failure Risks via Natural Frequency Analysis

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Circulating Currents in Transformer Clamping System

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Nonlinear Electromagnetic Modeling of a Phase-Shifting Transformer Based on DC Hysteresis Measurements

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An Accurate Detailed Model for Transformer Disc Windings Suitable for Medium Frequency Range

Piri, Jalal (1); Mirzaei, Hassan Reza (1); Ghorbal, Mohammed Bilal (1); RAHIMPOUR, Ebrahim (2)
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Thermal Network Modeling of Transformer Windings for Accurate Hotspot Prediction

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Adaptive Cross Approximation for Efficient Modeling of Frequency-Dependent Resistance in Multiple-Conductor Systems

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Computation of the inductance matrix of transformer windings by using cylindrical multipole expansions

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Boundary Element and Optimization-Based Methodology for Transformer Insulation Design

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Optimization of the Electrical Insulation Between Grounded Rod and Winding

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The Influence of Hysteresis Modeling on the Calculation of Magnetic Fields

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Exploring Intermediate Results of Dynamic Thermal-Hydraulic Network Model Influencing Characteristic Temperatures inside Liquid Immersed Transformers

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Assessment of transformer insulation by decision trees using a combinational weighting model

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