Presentations

Oral Session OA1: Electromagnetic fields

Time: Monday, 28/Aug/2017: 2:00pm - 3:30pm · *Location:* Aula Magna
Session Chair: Jean Rodolphe Roche
Session Chair: Xingming Bian

Coupled Analysis and Measurements of an Earthing Switch under Transient Short-Circuit Conditions

Zeljko Tanasic[1], Michael Schueller[1], Matthias Bucher[1], Jasmin Smajic[1], Lukas Zehnder[2], Thomas Werder-Schlaepfer[2], Jean-Claude Mauroux[2]
[1]University of applied sciences Rapperswil, Switzerland; [2]High Current Systems Unit, ABB Switzerland Ltd., Switzerland; zeljko.tanasic@hsr.ch

Electric field calculations and measurements on composite insulating materials with and without defects

Longfei Cui, Meghana Ramesh, Ravi Gorur
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Numerical Full Wave Simulation in a Tokamak Plasma

Aurore Back[1], Rihab Daadaa[1], Simon Labrunie[1], Pierre Bertrand[2], Jean Rodolphe Roche[1]
[1]IECL, Universite de Lorraine, France; [2]IJL, Universite de Lorraine, France; roche6@univ-lorraine.fr

Studies on parameters influencing the armour and shield losses of submarine power cables

Sebastian Florian Sturm[1], Johannes Paulus[1], Frank Berger[2], Karl-Ludwig Abken[3]
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Adaptable FEM Models with High Level of Detail to characterize Insulation Systems of Large Rotating Machines

Axel Staubach[1], Guido Schmidt[2], Friedhelm Pohlmann[2], Holger Hirsch[1]
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Oral Session OC1: HV testing techniques

Time: Monday, 28/Aug/2017: 2:00pm - 3:30pm · *Location:* Multi-Purpose Salon
Session Chair: William Larzelere
Session Chair: Wojciech Koltunowicz

Applicability of IEC 60270 for Partial Discharge Measurements under DC Voltage - Results of a Round Robin Test

Michael Hartje[1], Lars Kästingschäfer[1], Mohsen Farahani[2], Peter Werle[2], Alexander Pirker[3], Uwe Schichler[3]
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Atmospheric and Altitude Correction Methods for Air Gaps and Clean Insulators – Corrections for Short Gaps under DC and Application Difficulties - Part 1

Johannes Rickmann[1], Ricardo Diaz[2], Cuthbert Nyamupangedengu[3], Nishant Parus[4], Dragan Tabakovic[5], Dong Wu[6]
[1]Phenix Technologies, United States of America; [2]National University of Tucuman, Argentina; [3]University of Witswatersrand, South Africa; [4]Eskom, South Africa; [5]DDT; [6]ABB AB, Sweden; johannes@phenixtech.com

CHARACTERIZATION OF A FAST STEP GENERATOR

Anders Bergman[1], Mathias Nordlund[1], Alf-Peter Elg[1], Johann Meisner[2], Stephan Passon[2], Jari Hällström[3], Tapio Lehtonen[3]
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Comparison Test of Switching-Impulse-High-Voltage Measuring System in Japan

Satoru Miyazaki[1], Etsuhiro Hino[2], Haruhisa Wada[3], Junzo Kida[4], Tomoki Banno[5], Takayuki Wakimoto[6], Masaru Ishii[7]
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Design of a modular wideband high-voltage divider for metrological purposes with a greenhouse friendly isolation gas

Stephan Passon[1], Johann Meisner[1], Alexander Heinrich[1], Marius Matern[2], Christoph Klosinski[2], Nasser Hemdan[2], Michael Hilbert[2], Michael Kurrat[2], Frank Gerdinand[3]
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Measurement of the Internal Inductance of Impulse Voltage Generators and the Limits of LI Front Times.

William Larzelere[1], Jari Hällström[2], Anders Bergman[3], Alf Peter Elg[3], Yi Li[4], Joni Vijami Kluss[5], Lijun Zhou[6]
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Poster Session PA1: Electromagnetic fields

Time: Monday, 28/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 2

Capacitance simulation method for HV-VCB with floating potential shield design based on FEM

Benjamin Kuehn[1], Hilbert Michael[1], Kurrat Michael[1], Gentsch Dietmar[2]

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The Equivalent Circuit for Transformer with Core Laminations Fault

Ilia Elagin[1], Aleksei Kruzhaev[2]

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AC/DC Corona Characteristics of the Conductors in an Indoor Corona Cage

Aytuğ Font, M. Said Ersoy, Suat İlhan, Aydoğan Özdemir

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Effect of slightly conductive barrier systems on breakdown voltage of an air insulated rod plane arrangement shown in experiment and simulation

Michael Schueller, Matthias Bucher, Thomas Franz, Jasmin Smajic

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Studies on Planar Transmission Lines as Defaulting Circuits

Jobson de Araújo Nascimento, Regina Maria de Lima Neta, José Moraes Gurgel Neto, Alexsandro Aleixo Pereira da Silva, João Gabriel Bonifácio Presbítero Xavier, Lucas Cardeal Silva

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Application of Finite Element Simulations for Cable Installations.

Jeremiah Jesaja Walker[1], Taryn Robin Becker[2]

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Poster Session PB1: Transient voltages

Time: Monday, 28/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 1

Insulation Coordination for 500/220 KV GIS Outdoor High Voltages Substation

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Opposite leaders as a cause of barrier insulation breakdown

Andrey Samusenko, Yury Stishkov
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Flashover rate of vertically-arranged 6.6 kV power distribution line

Koji Michishita, Shigeru Yokoyama
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REDUCED-SCALE EXPERIMENT OF TRANSMISSION-LINE TOWER IMPULSE GROUNDING IMPEDANCE

Jiangtao Li, Hui Cao, Xing Liu, Kefu He, Minjun Zheng, Zheng Zhao, Ziyuan Ren, Yuhao Liu, Jiaxin He, Yi Sun
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Transient characteristics of 220kV double-circuit cables in parallel

Yi Sun, Zheng Li, Zheng Zhao, Hui Cao, Minjun Zheng, jiaxin He, Yuhao Liu
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The Configuration Effect of UHV Substation on VFTO and its Inhibitory Effect Analysis

Hongshun Liu[1], Liang Ji[2], Mingming Han[1], Xinghua Liu[3], Xuebin Lv[3], Xuefeng Sun[3], Tao Wang[3], Shikun Wang[3], Peng Yu[3], Yin Pei[3]
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Method for identifying the soil ionization curve due to application of impulse currents in grounding rods

Gabriel Vidal Negreiros Bezerra, Helder Alves Pereira, Edson Guedes da Costa, Larissa Diniz
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Transient analysis of multi-circuits transmission lines with respect to inductive and capacitive coupling

Zdenka Benesova[1], Tomas Nazarcik[2]
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Oral Session OB1: Transient voltages

Time: Monday, 28/Aug/2017: 4:00pm - 5:30pm · *Location:* Aula Magna
Session Chair: Xingming Bian
Session Chair: George Rossany Soares Lira

Creeping discharge in air: streamers visualizations and transient current

Laure Trémas[1,2], Olivier Lesaint[2], Nelly Bonifaci[2], Brigitte Ohl[1], François Gentils[1]
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Effects of Transients on Breakdown of XLPE Cable Insulation

Jiayang Wu, Huifei Jin, Armando Rodrigo Mor, Johan J. Smit
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Investigation of Ferroresonance in a High Voltage Network - Measurement and Numerical Simulation

Juergen Plesch[1], Stephan Pack[1], Wolfgang Huska[2], Georg Achleitner[2]
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The Amplitude-Frequency Characteristics of VFTO Based on Frequency-dependent Transmission Line Model

Xinghua Liu[1], Xuebin Lv[1], Xuefeng Sun[1], Tao Wang[1], Shikun Wang[1], Peng Yu[1], Yin Pei[1], Liang Ji[2], Hongshun Liu[3], Mingming Han[3]
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Transformer magnetic core models for investigating core saturation process during geomagnetic disturbance

Yufan Ni[1], Zhongdong Wang[1], Paul Jarman[2]
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Transient Behavior of line-connections between GIS and Transformers

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Oral Session OC2: HV testing techniques

Time: Monday, 28/Aug/2017: 4:00pm - 5:30pm · *Location:* Multi-Purpose Salon
Session Chair: Jari Hällström
Session Chair: William Larzelere

Design and performance of a fast divider for puncture testing

Jari Hällström[1], Syed Kazmi[2], Jussi Havunen[1], Marja-Leena Pykälä[1]
[1]VTT MIKES, Finland; [2]Aalto University, Finland; jari.hallstrom@vtt.fi

Development and calibration of an HV Impulse Reference Divider

Claudio Cherbaucich[1], Mario Gentili[1], Jari Hällström[2], Jussi Havunen[2], Paolo Mazza[1], Andrea Orrea[3], Giuseppe Rizzi[4], Angelo Sardi[5]
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A METROLOGY GRADE FIBRE OPTICAL CURRENT SENSOR

Alf-Peter Elg[1], Mikael Lindgren[1], Per Olof Hedekvist[1], Sven-Christian Ebenhag[1], Jari Hällström[2], Daniela Istrate[3], Pontus Johannisson[4], Pauli Kiiveri[5], Pawel Niewzcas[6], Gregorz Fusiek[6]
[1]SP Technical Research Institute of Sweden, Sweden; [2]VTT Technical Research Centre of Finland Ltd, Centre for Metrology MIKES; [3]LNE Laboratoire National de Métrologie et D´Essais; [4]Acreo Swedish ICT AB; [5]ADB Safegate; [6]Electronic & Electrical Engineering Department, University of Strathclyde; alf.elg@ri.se

Electro-optic Kerr effect measurements of electric field distributions at DC voltage in mineral oil

Hans-Peter Öftering[1], Andreas Küchler[1], Ronny Fritsche[2], Frank Jenau[3]
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Using Deconvolution for Correction of Non-Ideal Step Response of Lightning Impulse Digitizers and Measurement Systems

Jussi Havunen[1], Jari Hällström[1], Anders Bergman[2], Allan E. Bergman[2]
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Calibration of Parameters of the Electrical Fast Transient Test System

Wei Yan[1], Wei Zhao[2], Yi Li[1]
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Poster Session PA2: Electromagnetic fields

Time: Monday, 28/Aug/2017: 4:00pm - 5:30pm · *Location:* Foyer 2

ELECTRIC FIELD CALCULATIONS ON OUTDOOR INSULATORS INCLUDING THE EFFECT OF ARC JUMPING

Jiahong He[1], Ravi S. Gorur[2]

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A Mathematical Modeling of the Number of Short Circuits Withstood by Transformer Windings

Filipe Lucena Medeiros de Andrade, Edson Guedes da Costa, Jalberth Fernandes de Araujo, Joao Pedro da Costa Souza, Tarso Vilela Ferreira

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Simulation of surface charges on dielectrics in ion flow fields

Yongchang Meng, Bo Zhang, Jinliang He, Jun Hu

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ELECTROMAGNETIC FORCES BEHAVIOR IN THE AIR GAPS OF A PROTECTIVE CURRENT TRANSFORMER

Regelii Ferreira, Edson Costa, Jalberth Araujo, Filipe Andrade, Francisco Guerra

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Comparison Between Two Transformer Winding Models for the Determination of Electromechanical Forces Using FEM

Filipe Lucena Medeiros de Andrade, Edson Guedes da Costa, Rafael Mendonça Rocha Barros, Jalberth Fernandes de Araujo, João Pedro da Costa Souza, Tarso Vilela Ferreira

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STUDY OF EFFECT OF CONTINUOUS DISCHARGES DUE WATER DROPLETS ON THE SURFACE OF POLYMERIC INSULATORS

Buddha Yashodhara[1], K.A. Aravind[2], Pradeep M Nirgude[3], D. Devendranath[4]

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Using Finite Element Analysis to Investigate Tan Delta in Complex Insulation Systems

Theresa Joubert[1], Jerry Walker[2]

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Poster Session PB2: Transient voltages

Time: Monday, 28/Aug/2017: 4:00pm - 5:30pm · *Location:* Foyer 1

Critical Flashover Voltage on Polluted Insulators Estimated Using Conventional and Intelligent Techniques

Vasilios P. Androvitsaneas[1], Evangelos Karampotsis[2], Ioannis F. Gonos[1], Georgios Dounias[2], Ioannis A. Stathopulos[1]

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A solution to optimal performance of overvoltage protection in cases of Cable-OHL and Cable-GIS interconnection

Mladen IGLIČ[1], Rado FERLIČ[2], Robert MARUŠA[2], Ivo KOBAL[1]

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Monte Carlo Lightning Performance Analysis of Overhead Transmission Lines protected by ZnO Arresters using MATLAB/ATP

Rafael Silva de Oliveira[1,2], Ivan José da Silva Lopes[2]

[1]CEMIG (Minas Gerais State Power Utility), Brazil; [2]Federal University of Minas Gerais, Brazil; rafasdeoliveira@gmail.com

Three-phase EHV measurements during switching transients with open air sensors

Fani Barakou, Dimitrios Barakos, Frank Beckers, Marcel Hoogerman, René Hoppe van, Hennie Zanden van der, Peter Wouters

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Analysis of Grounding Systems applied to a Distribution Line of Maceió-AL in front of Atmospheric Outbreaks

Jose Moraes Gurgel Neto, Alexsandro Aleixo Pereira da Silva, Regina Maria de Lima Neta, Jobson de Araújo Nascimento, Adriano Nogueira da Silva Filho, Luiz Hilton de Moraes Amancio

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Attenuation of transient overvoltages in the low voltage network due to chopped lightning impulse tests

Caio Ruzza de Ávila Pereira, Gabriel Miguel Gomes Guerreiro, Ivan Paulo de Faria, Gustavo Paiva Lopes, Estácio Tavares Wanderley Neto

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SENSITIVITY STUDY OF INDUCED TRANSIENT OVERVOLTAGES ON DISTRIBUTION NETWORKS

Luis Eduardo Perdomo Orjuela[1,2], Andrés Alfonso Rodríguez[1,2], Francisco Santamaria[1], Francisco Roman[2]

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Earth Resistivity Increase due to the Presence of Trees

Francisco Roman, Daniel Gomez, Cristian Camilo Rodriguez

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Oral Session OC3: HV testing techniques

Time: Tuesday, 29/Aug/2017: 9:00am - 10:30am · *Location:* Multi-Purpose Salon
Session Chair: Michael Hartje
Session Chair: Alf-Peter Elg

Energy based Wavelet Selection for de-noising PD signals using Modified Wavelet Packet Transform

Jayakrishnan M[1], Nageshwar Rao Burjupati[2]
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Frequency Dependent Transfer Characteristics of HV Instrument Transformers – State of the Art

Robert Stiegler[1], Michael Freiburg[2], Jan Meyer[1], Erik Sperling[3]
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High-accuracy reference setup for system calibration of transformer loss measurement systems

Gert Rietveld, Ernest Houtzager
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AC FLASHOVER PERFORMANCE OF A HORIZONTAL INSULATOR STRING UNDER HEAVY ICING CONDITIONS

Babak Porkar, Masoud Farzaneh
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LINE INSULATOR PERFORMANCE IN PRESENCE OF ICE AND SNOW

Rosario Cortina[1], Alberto Pigini[1], Massimo Marzinotto[2], Giuseppe Lagrotteria[3]
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Oral Session OD1: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 9:00am - 10:30am · *Location:* Aula Magna
Session Chair: Shigemitsu Okabe
Session Chair: Josef Pihera

Characterization of HFO1234ze mixtures with N2 and CO2 for use as gaseous electrical insulation media

Alise Chachereau, Christian Franck
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Decomposition of Alternative Gaseous Insulation under Partial Discharge

Philipp Simka, Charles Doiron, Anna Di-Gianni, Saskia Scheel
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Dielectric Properties and Suitability of CF3I and its Mixture as Insulation Medium to Gas Insulated Transmission Line

Akiko Kumada, Kunihiko Hidaka
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Dielectric properties of fluorine containing insulating gases for gas insulated systems

Johannes Wiener[1], Volker Hinrichsen[1], Felix Goll[2], Karsten Juhre[2]
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ELECTRICAL AND DIELECTRIC PROPERTIES OF ZRO2 DOPED ZNO VARISTOR

Jinqiang He, Jiajun Lin, Wenfeng Liu, Shengtao Li
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High field nonlinear relaxational polarization of aluminum- and hafniumoxide

Herbert Kliem, Laxman Kankate
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Poster Session PB3: Transient voltages

Time: Tuesday, 29/Aug/2017: 9:00am - 10:30am · *Location:* Foyer 2

ELECTRIC MODEL OF CURRENT IMPULSE GENERATOR APPLIED TO GROUND GRIDS

Marconni Freitas Barroso Ribeiro Gonçalves[1], Edson Guedes da Costa[1], João Marcelo Costa Leal da Silva[1], Felipe José Lucena Araújo[2], Carlos Juacyr Anacleto de Oliveira Filho[1]

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EXPERIMENTAL RESEARCH OF EFFECTS OF AIR PRESSURE AND HUMIDITY ON THE LEADER DISCHARGE IN THE AIR GAP

Zezhong Wang, Chijie Zhuang, Yinan Geng, Yingzhe Cui, Rong Zeng

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Evaluation of the grounding resistance reduction due to soil treatment for different grounding electrode configurations

Johny Montana, Jorge Ardila, Roger Schurch

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INDUCED VOLTAGE BEHAVIOUR ANALYSIS OF AN UN-GROUNDED OUTER LAYER SEMI-CONDUCTIVE COATING OF A 400 kV POWER CABLE SYSTEM

Peet Schutte[1], Chris van der Merwe[2], John van Coller[3]

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A Compact 10 kV Impulse Source for Calibrating Fast Impulse Voltage Measurement Systems

Wei Zhao[1], Wei Yan[2], Yang Pan[3], Yi Li[2]

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Marine Lightning Protection: Some new advances

Eleni Nicolopoulou, Ioannis Gonos, Ioannis Stathopulos

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Cable Joints Effect in Partial Discharge Signal Propagation

Mahdi Mahdipour[1], Asghar Akbari[1], Peter Werle[2]

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Calculation and Simulating Experiment on Effectiveness of Anti-ferroresonance Methods for 10kV Transmission Line

Xuezhong Liu[1], Shijin Tian[1], Shuang Liu[1], Meng Wang[1], Hongwen Liu[2], Zhilei Zhang[3]

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Poster Session PD1: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 9:00am - 10:30am · *Location:* Foyer 1

Contaminated Partial Arc Resistance Test for SiR Materials Used for Outdoor Insulators

Takaie Matsumoto, Hisashi Ichikawa
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Development of 154kV and 275kV Polymer Bushings for Transformer

Naoki Tanaka, Kuniaki Kondo, Kenji Sato, Kazuhiro Tsuji
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Effect of Micro-sized Filler Loading on Surface Erosion of Silicone Rubber Composite Insulators

Zhijun Wang, Muhammad Tariq Nazir, Bao Toan Phung
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Barrier effect on the dielectric strength of the transformer insulating oils

Sherif Ghoneim[1], Sobhy Dessouky[2], Adel Elfaraskoury[3], Ahmed Abou Sharaf[4]
[1]Suez University, Egypt; [2]Port Said University; [3]Egyptian Electricity Holding Company; [4]Helwan University;
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Investigation on Room Temperature Vulcanized Silicon Insulation With and Without ATH Filler Loading by Incline Plane Tracking & Erosion Test Method

Rafiq Mathersa, Chirag Vibhakar, Binita Dutta, Vasudev N
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Test setup and advantages of parallel polarization and depolarization current measurements with space charge measurements by LIPP method

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THERMOGRAVIMETRIC EVALUATION OF SILICONE RUBBER COMPOUNDS USED IN DISTRIBUTION SURGE ARRESTERS

Rodolfo Cardoso Buontempo[1,2,3], Jorge Luiz de Franco[1,4,5], Sanderson Rocha de Abreu[1,6], Fernando Cesar Cândido de Lima[1,7], José Pissolato Filho[1]
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Oral Session OC4: HV testing techniques

Time: Tuesday, 29/Aug/2017: 11:00am - 12:30pm · *Location:* Multi-Purpose Salon
Session Chair: Alf-Peter Elg
Session Chair: Michael Hartje

INFLUENCE OF COAXIAL CABLE ON RESPONSE OF HIGH VOLTAGE RESISTIVE DIVIDERS

Mathias Nordlund[1], Anders Bergman[1], Alf-Peter Elg[1], Jussi Havunen[2], Jari Hällström[2], Johann Meisner[3]
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Effect of Test Voltage Function on a Front-Time of Lightning Impulse Voltage Measured by a Long Measuring Cable

Shuji Sato[1], Seisuke Nishimura[2], Hiroyuki Shimizu[2]
[1]Utsunomiya University, Japan; [2]Nippon Institute of Technology, Japan; heimat@kce.biglobe.ne.jp

Protection and measuring elements in the superimposed test setup

Mahmoud Felk, Ralf Pietsch, Martin Kubat, Thomas Steiner
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Superimposed Impulse Voltage Testing on extruded DC-Cables according to IEC CDV 62895

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BASIC RESEARCH OF HIGHLY VISCOUS SILICONE PASTE and -liquids REGARDING THEIR DIELECTRIC STRENGHT AND DISSIPATION FACTOR

Robert Bach[1], Sebastian Winkelmann[1], Juergen Krott[2], Falk Braun[2], Cornelius Epple[1]
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Generator for Current Injection on High DC Potential to Test HVDC Equipment

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Oral Session OD2: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 11:00am - 12:30pm · *Location:* Aula Magna
Session Chair: Josef Pihera
Session Chair: Shigemitsu Okabe

Investigation of the Electric and Dielectric Properties of Special Silicone Compounds

Mirnes Aganbegovic, Peter Werle
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On the Pollution-Flashover-Behaviour of Partially Silicone Coated Cap and Pin Insulators

Stefan Kuehnel[1], Stefan Kornhuber[1], Roland Baersch[1], Jens Lambrecht[2]
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A NOVEL FABRICATION TECHNIQUE OF PERMITTIVITY GRADED MATERIALS BY FLEXIBLE MIXTURE CASTING METHOD FOR GIS SPACERS

Naoki Hayakawa[1], Yoshitaka Miyaji[1], Kenta Ochiai[1], Hiroki Kojima[1], Katsumi Kato[2]
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Gaseous By-Products of a CF3I-CO2 Gas Mixture under Lightning Impulse and AC Breakdowns

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Capacitive Coupling Sensor Application for Monitoring and Diagnosis of High Voltage Circuit Breakers

Henrique Nunes de Santana[1], Edson Guedes da Costa[1], Adriano Costa de Oliveira[1], Herbet Filipe dos Santos Sousa[1], Tarso Vilela Ferreira[2]
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Poster Session PC1: HV testing techniques

Time: Tuesday, 29/Aug/2017: 11:00am - 12:30pm · *Location:* Foyer 2

EVALUATION OF STEP RESPONSE OF TRANSIENT RECORDERS FOR LIGHTNING IMPULSE

Anders Bergman[1], Alf-Peter Elg[1], Jari Hällström[2]
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Breakdown Triggered by Microparticle in Vacuum Gap

Haruki Ejiri[1], Akiko Kumada[1], Kunihiko Hidaka[1], Taiki Donen[2], Mitsuru Tsukima[2]
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Rogowski coil with reduced immunity to conductor location and stray magnetic fields

Jari Hällström[1], Burak Ayhan[2], Esa-Pekka Suomalainen[1], Alvaro Valero[3]
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PTB's new standard impulse voltage divider for traceable calibrations up to 1 MV

Johann Meisner[1], Stephan Passon[1], Carola Schierding[2], Michael Hilbert[2], Michael Kurrat[2]
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DETERMINATION TECHNIQUE FOR WAVE PARAMETERS OF SWITCHING IMPULSE VOLTAGE UTILIZING DIGITAL FILTER

Takayuki Wakimoto[1], Akira Ito[1], Masaru Ishii[2]
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Proposal of Waveform Parameters Determination Techniques for Steady State a.c. and Short-time a.c. Waveforms generated by IEC 61083-4 TDG

Shuji Sato[1], Seisuke Nishimura[2], Hiroyuki Shimizu[2]
[1]Utsunomiya University, Japan; [2]NIppon Institute of Technology, Japan; heimat@kce.biglobe.ne.jp

Proposal of New K-factor Function inLightning Impulse Test for Electric Power Equipment

Shigemitsu Okabe[1], Genyo Ueta[1], Toshihiro Tsuboi[1], Masayuki Hikita[2]
[1]Tokyo Electric Power Company Holdings, Inc., Japan; [2]Kyushu Institute of Technology; okabe.s@tepco.co.jp

CHARACTERISATION AT LOW VOLTAGE OF TWO REFERENCE LIGHTNING IMPULSE DIVIDERS

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Poster Session PD2: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 11:00am - 12:30pm · *Location:* Foyer 1

Quantum chemical analysis of the effect of impurities on carrier transfer properties in polyethylene

Masahiro Sato, Akiko Kumada, Kunihiko Hidaka, Toshiyuki Hirano, Fumitoshi Sato
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Charge transport characteristics of LDPE/HDPE under different electric fields

Zhimin Yan, Jianying Li, Fusheng Zhou, Xu Zhang, Yueqiang Yang
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Performance of Alternative Coatings Based on RTV Silicone Rubber under Artificial Pollution Tests

Raphael Borges Nóbrega, Edson Guedes Costa, André Dantas Germano, Alfredo Irineu Silva Neto, Hiago Richard Santa Cruz Martins Barbosa
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INVESTIGATION THE CORRELATION BETWEEN SURFACE RESISTANCE AND SURFACE FLASHOVER OF AL2O3 IN VACUUM

Naoki Asari, Chihiro Tateyama, Wataru Sakaguchi, Tetsu Shioiri, Junichi Kondo
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Criteria for Channel Heating Breakdown under Non-Uniform Electric Field in Air

Hiroki Kojima[1], Kazuki Sugino[1], Atsushi Ohtake[2], Kinya Kobayashi[2], Tatsuro Kato[2], Toshiaki Rokunohe[2], Naoki Hayakawa[1]
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Natural Ester Oils – Aditional Features

Pavel Trnka, Vaclav Mentlik, Pavel Totzauer, Jaroslav Hornak, Josef Pihera
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Investigation of prebreakdown phenomenon and discharge locations in the insulator with the metallized layer in vacuum

Ryuhei Yamazaki, Yasushi Yamano
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Simultaneous measurement of hot spot temperature and trace moisture in a high voltage operating transformer using a fiber optics sensor pair

Peter Kung[1], Robert Idsinga[1], Huayna-Chaska Vera-Durand[1], Hua Lu[2], Mojtaba Kahrizi[3]
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Oral Session OD3: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 2:00pm - 3:30pm · *Location:* Aula Magna
Session Chair: A. Manu Haddad
Session Chair: Edson Costa

DIELECTRIC CHARACTERISTICS COMPARISON OF INSULATING BABAÇU'S GRAIN VEGETABLE OIL AND TRANSFORMERS MINERAL OIL

George Victor Rocha Xavier, Edson Guedes da Costa, Herbet Sousa, Ramon Dias, Regelii Ferreira, Lidja Alves
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Effects of Conductive and Dielectric Nanoparticles on the Streamer Propagation in Transformer Oil

Hongda Guo[1,2], Peter Werle[1], Wenxia Sima[2], Hossein Borsi[1], Xin Zhou[1], Mohammad Taghi Imani[1]
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INVESTIGATION OF LOW TEMPERATURE AND ELECTRIC STRESS BEHAVIOUR OF DIFFERENT NATURAL ESTER LIQUIDS

Stephanie Haegele[1], Stefan Tenbohlen[1], Eric Junge[2], Martin Konermann[2]
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Investigation on Electric and Dielectric Behavior of Magnetite Doped Nanofluids

Mohammad Taghi Imani[1], Peter Werle[1], Jan Frederick Miethe[2], Nadja-Carola Bigall[2], Hongda Guo[1]
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INTERACTION OF LOW GLOBAL WARMING POTENTIAL GASEOUS DIELECTRICS WITH MATERIALS OF GAS-INSULATED SYSTEMS

Florian Kessler, Wiebke Sarfert-Gast, Martin Ise, Felix Goll
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Oral Session OE1: Monitoring and Diagnostics

Time: Tuesday, 29/Aug/2017: 2:00pm - 3:30pm · *Location:* Multi-Purpose Salon
Session Chair: Fernando Garnacho
Session Chair: Nageshwar Rao Burjupati

Analysis of field measurement results of a spatially-resolved diagnostic method for power cables

Erik Fischer, Christian Weindl
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Comparative Investigations on High Voltage Cable with needle defect using Damped-AC and 50-Hz-AC

Robert Bach[1], Christian Walter[2], Daniel Müller[1]
[1]University of applied Science South Westfalia, Soest, Germany; [2]Bayernwerk AG, Bayreuth, Germany; bach.robert@fh-swf.de

Investigation of the acoustical material properties of XLPE dependent on the degree of crosslinking

Henning Frechen[1], Gregor Brammer[2], Armin Schnettler[1]
[1]RWTH Aachen University, Aachen, Germany; [2]Forschungsgemeinschaft für Elektrische Anlagen und Stromwirtschaft e.V., Mannheim, Germany; frechen@ifht.rwth-aachen.de

CALCULATING THE FRACTAL DIMENSION FROM 3D IMAGES OF ELECTRICAL TREES

Roger Schurch[1], Cristobal Gonzalez[1], Pablo Aguirre[1], Marcos Zuniga[1], Simon M. Rowland[2], Ibrahim Iddrissu[2]
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Lab testing of external gas pressure cables and determination of different ageing states

Vladimir Stamenkovic[1], Frédéric Thibaut Felsheim[1], Ronald Plath[1], Thomas Kapa[2]
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Comparison of VLF and power frequency measurements for diagnostic analysis of medium voltage PILC cables

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Poster Session PC2: HV testing techniques

Time: Tuesday, 29/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 2

A Direction Finding Method for Partial Discharge in Air-Insulated Substation Based on UHF Array

Qing Liu[1], Ming-Xiao Zhu[1], Yan-Bo Wang[1], Jun-Bo Deng[1], Yuan Li[1], Hai-Bao Mu[1], Guan-Jun Zhang[1], Hu Li[2]
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A STUDY ON PARTIAL DISCHARGE MODELLING IN EPOXY INSULATION.

Isaac Kwabena Kyere, Jerry Walker
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Statistical Analysis of Surface Discharges in Rotating Machine Stator Insulation System

Ramesh P Nair[1], Sumangala B V[2], Nageshwar Rao Burjupati[1]
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ON-SITE TESTING OF PARTIAL DISCHARGE FOR 750 KV SHUNT REACTORS

Minjun Zheng[1], Jiaxin He[1], Jun Kang[2], Zheng Zhao[1], Hui Cao[1], Ziyuan Ren[1], Yi Sun[1], Yuhao Liu[1], Shengjie Wang[1], Xinlong Yu[2]
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The Inception time of Partial Discharge for Varied Electrode Shape on Distorted Voltage Environment

Aji Nur Widyanto, Budi Sudiarto, Holger Hirsch
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SIMULATION AND MEASUREMENT OF S PARAMETER IN UHF BAND OF GIS

Xian-Jun Shao[1,2], Yan-Bo Wang[1], Ding-Ge Chang[1], Shi Liu[2], Qing Liu[1], Wen-Lin He[2], Guan-Jun Zhang[1]
[1]Xi'an Jiaotong University, China, People's Republic of; [2]Research Institute of State Grid Zhejiang Electric Power Company, Hangzhou, China, People´s Republic of; shaoxianjun0575@163.com

Experimental Validation of an Alternative Method to Estimate the Parameters of Tail Chopped Lightning Impulses

Lilian Santos Ferreira[1], Carlos R. Hall Barbosa[2], Marcio Thelio Silva[1], Luiz Carlos Azevedo[1]
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EVALUATION OF THE CLEARANCES FOR METAL ENCLOSED EQUIPMENT

Jose Antonio Cardoso[2], Darcy Ramalho de Mello[1]
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Poster Session PD3: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 1

Influence of Interfacial Pressure on Dielectric Performance of the Interface between PE and Silicon

Mohsen Farahani[1], Peter Werle[1], Jens Hohloch[2], Wolfgang Hutt[2]
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Factors Affecting the Behavior of Polymeric Materials by Filler Effect under Different Contaminant Drops on the Surface of Insulation

Ramadan Aly, Sobhy S. Desouky, Khaled A. Helal
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Study on Characterization Parameter of Algae Growth Degree on Silicone Rubber Surface

Xiaogang Ouyang[1], Zhidong Jia[1], Ye Wang[1], Shifang Yang[1], Huan Bai[2], Xinghai Zhang[2]
[1]Graduate School at Shenzhen, Tsinghua University, China, People's Republic of; [2]Electric Power Research Institute of State Grid Sichuan Electric Power Company, China, People's Republic of; jiazd@sz.tsinghua.edu.cn

Partial Discharge and Deffects Formation Characterisics of Alumina Ceramics Heat Treated under Various Gas Conditions

Toshihiko Takematsu[1], Taiki Donen[1], Takayuki Itotani[2], Hiromi Koga[2]
[1]Mitsubishi Electric Corporation Advanced Technology R&D Center; [2]Mitsubishi Electric Corporation Power Distribution Systems Center; Takematsu.Toshihiko@cw.MitsubishiElectric.co.jp

Analysis of an Alternative Filler for RTV Silicone Rubber Coatings Applied in Outdoor Insulation

Raphael Borges Nóbrega, Edson Guedes Costa, André Dantas Germano, Lidja Nayara Tavares Alves, Daniella Cibele Bezerra, Ana Cristina Figueiredo de Melo Costa
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Partial Discharge Inception Voltage of Power Transformers sealed by gas cushions

Moritz Kuhnke, Kristin Homeier, Peter Werle
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Research on Cross-layer Moisture Diffusion Process in Oil-paper Insulation Structure of Capacitor Type Bushing

Zhong Zheng, Meng Sun, Yuan-zhao Han
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DRIFT-DIFFUSION MODELLING OF BREAKDOWN OF SF6 MIXTURES

Matthew Daniel Brown, Andrew Graham Swanson, Leigh Jarvis
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Oral Session OD4: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 4:00pm - 5:30pm · *Location:* Aula Magna
Session Chair: Edson Costa
Session Chair: A. Manu Haddad

Nonwoven Nanofibers Composites and their Partial Discharges Behaviour

Josef Pihera[1], Radek Polansky[1], Pavel Prosr[1], Jiri Chvojka[2], Monika Zemanova[1]
[1]University of West Bohemia, Czech Republic; [2]Technical University of Liberec, Czech Republic; pihera@ket.zcu.cz

Outstanding nonlinear properties at small current range in xBi2/3Cu3Ti4O12/(1-x)CaCu3Ti4O12 composites

Zhuang Tang, Yuwei Huang, Kangning Wu, Jianying Li
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Partial discharge and breakdown properties in N2, CO2, dry air and SF6 initiated by metallic particles fixed on high voltage conductor and attached on spacer surface at AC voltages

Takashi Yoshida[1], Yoshinori Shimizu[1], Kiyoshi Inami[1], Hiroyuki Hama[1], Genyo Ueta[2], Junichi Wada[2], Shigemitsu Okabe[2]
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Temperature Dependent Surface Potential Decay Properties of Polyimide

Xiaoping Wang, Shaoming Pan, Daomin Min, Shijun Li, Shengtao Li
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Determination of the influence of ageing parameters on the streamer characteristics of natural and synthetic esters under lightning impulse voltage

Sabrina Krügel, Ronald Plath, Frank Behrendt
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Oral Session OE2: Monitoring and Diagnostics

Time: Tuesday, 29/Aug/2017: 4:00pm - 5:30pm · *Location:* Multi-Purpose Salon
Session Chair: Nageshwar Rao Burjupati
Session Chair: Fernando Garnacho

Measurement and Analysis of Partial Discharges in HVDC Gas Insulated Substations

Etienne Ouss[1,2], Laetitia Zavattoni[1], Abderrahmane Beroual[1,2], Alain Girodet[1], Paul Vinson[1]
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Knowledge Rules for the health status of GIS insulation systems using UHF Partial Discharge Measurements

Muhannad Al-Suhaily[1], Sander Meijer[2], Johan J. Smit[2]
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Correction of Temperature for Dielectric Measurements in Time Domain

Markus Hans Zink, Karina Hopf
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ASSESSMENT OF FIELD AGED COMPOSITE INSULATORS

K. A. Aravind[1], B. Sravanthi[2], B. Yashodhara[1], Pradeep M. Nirgude[1], K. Sandhya[1], A. V. R. S. Sarma[3], V. KamarajuV[4]
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Detection of Faults in Rotor-Windings of Turbogenerators using Sweep Frequency Response Analysis (SFRA) method

Christian Staubach[1], Stefan Krane[1], Karina Desinger[1], Markus Rüter[2], Axel Staubach[3]
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Partial Discharges evaluation method at HVDC conditions

Josef Pihera, Kozak Ondrej, Haller Rainer, Kupka Lukas, Hornak Jaroslav
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Poster Session PC3: HV testing techniques

Time: Tuesday, 29/Aug/2017: 4:00pm - 5:30pm · *Location:* Foyer 2

Partial Discharge Inception Voltage Measurement and Its Estimation by Volume-Time Theory for SF6/PET Insulated Wedge Gap under Impulse Voltage

Kenta Maeda[1], Masahiro Kozako[1], Masayuki Hikita[1], Soh Yoshida[2], Takeshi Chigiri[2]
[1]Kyushu Institute of Technology, Japan; [2]Toshiba, Japan; m108107k@mail.kyutech.jp

Field Diagnosis Methods for determining the Insulation Health Index for Power Transformers

Adel ElFaraskoury
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Generation of an Analogue Lightning Impulse Simulated by a Virtual Impulse Generator

Akif Gürlek[1], Michael Würfel[1], Wolfgang Schufft[1], Thomas Barucki[2]
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Impact of small cavities on partial discharge behaviour in oil-paper insulation system under the effect of DC electric stress

Khaled Helal[1], Karsten Backhaus[2], Joachim Speck[2], Steffen Großmann[2], Ramadan Aly[1], Sobhy Dessouky[1]
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Research on the Temperature-Rise test of Large Capacity Generator Circuit Breaker

Yuan Yuan, Jiang Ning, Jia Zhuan-zhuan, Li He, Hu Dingyin, Mi Xiaofeng
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A New Software Utilization for the Comparability of the High Voltage and High Current Testing Results in Different Laboratories Based on Sensitive Parameters

Mahdi Rahimbakhsh, Peter Werle, Ernst Gockenbach
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The Effect of Voltage Harmonic Distortion to the repetition rate and apparent charge of Partial Discharge pulse

Aji Nur Widyanto, Budi Sudiarto, Holger Hirsch
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Automation and Analysis of Tests on Polymeric Insulators in Severe Ambient conditions

Felipe Lira Santana Silva[1], Andresa Aparecida Lemes Gomes[1], Tessa Martins de Carvalho Carneiro[2], Guilherme Martinez Figueiredo Ferraz[1], Alvaro Antônio Alencar de Queiroz[2], Guilherme Sousa Bastos[2]
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Poster Session PD4: Advanced Materials & Insulation

Time: Tuesday, 29/Aug/2017: 4:00pm - 5:30pm · *Location:* Foyer 1

INFLUENCE OF TOWNSEND'S COEFFICIENTS IN THE BEHAVIOR OF N2 AND SF6 DISCHARGES

George Victor Rocha Xavier, Edson Guedes da Costa, Arthur Andrade, Lenilson Barbosa, Rafaella Meira, Rodrigo Almeida

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Effect of Thermal Aging on Dielectric Properties of LDPE/TiO2 Nanocomposites

Youyuan Wang, Zhanxi Zhang, Kun Xiao, Can Wang

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INFLUENCE OF FILLER CONTENT ON TRAPS AND CONDUCTIVITY OF EPOXY RESIN NANOCOMPOSITES

Daomin Min, Chenyu Yan, Yin Huang, Dongri Xie, Wenfeng Liu, Shengtao Li

Xi'an Jiaotong University, China, People's Republic of; forrestmin@mail.xjtu.edu.cn

Epoxy Resin Insulator Surface Charge Dissipation Characteristics Coating with Different TiO2 Content

FuWen Zhou, Youping Tu, Yi Cheng, Binying Chen, Cong Wang, Sichen Qin

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Surface Discharge Characteristics of Epoxy Resin Insulation under Non-Uniform Electric Field Distribution

Suat Ilhan[1], Aytug Font[1], Ibrahim Yildiz[2], Kerem Koseoglu[2], Aydogan Ozdemir[1]

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EFFECTS OF CONTAMINATION IN THE ELECTRIC FIELD DISTRIBUTION ON POLYMER INSULATORS: AN EXPERIMENTAL AND COMPUTATIONAL INVESTIGATION

Danilo Farnese Reis, Ivan José Da Silva Lopes, Elson José Silva

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Performance of Boehmite nanoparticles in epoxy resin

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A partial discharge study of ultrastable colloidal nanofluid impregnated paper

Georgios D. Peppas[1], Vasilios P. Charalampakos[2], Eleftheria C. Pyrgioti[2], Thomas Tsovilis[3], Zafeiris Politis[1], Ioannis Gonos[4]

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Oral Session OD5: Advanced Materials & Insulation

Time: Wednesday, 30/Aug/2017: 9:00am - 10:30am · *Location:* Aula Magna
Session Chair: Michael Schueller
Session Chair: Maks Babuder

Electrical Insulators Hydrophobicity Classification using Digital Image Processing

Lidja Nayara Tavares Alves[1], Edson Guedes da Costa[2], Antonio Barbosa de Oliveira Neto[1], Raphael Borges da Nóbrega[1], Tarso Vilela Ferreira[3]
[1]Post - Graduate Program in Electrical Engineering, Federal University of Campina Grande (UFCG); [2]Electrical Engineering Department, Federal University of Campina Grande (UFCG); [3]Electrical Engineering Department, Federal University of Sergipe (UFS); lidja.alves@ee.ufcg.edu.br

Visual and infrared techniques for the assessment of partial arcs on conventional and textured insulator surfaces

Maurizio Albano, Ronald Thomas Waters, A. Manu Haddad
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Optimized design of HV- insulators with respect to extreme pollution for the coastal areas of South and North America

Jan Schulte-Fischedick[1], David Ernesto Gómez Torres[2], Norka Sotil-Bindels[1], Fabian Lehretz[1], Jens M. Seifert[1], Juan Guillermo Maya Montoya[2], Juan Carlos Garcés Restrepo[2], Sadik Bin Nizam[1]
[1]Lapp Insulators GmbH, Germany; [2]Interconexión Eléctrica S.A, Colombia; flehretz@lappinsulators.com

DIELECTRIC PERFORMANCE OF INSULATOR SURFACES IN CLEAN AIR FOR HIGH VOLTAGE GAS INSULATED SWITCHGEAR APPLICATION

Bernhard Lutz, Caroline Orth, Karsten Juhre, Nazmir Presser, Mark Kuschel
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Prediction of electric breakdown field and boiling point of gases using kernel ridge regression

Masahiro Sato, Akiko Kumada, Kunihiko Hidaka
The University of Tokyo, Japan; sato@hvg.t.u-tokyo.ac.jp

Evaluation of Flashover Performance of 154 kV Snow-accreted Composite Insulators Using Artificial Flashover Tests

Kohei Yaji[1], Hiroya Homma[1], Kazuo Adachi[1], Yasuhiko Hori[1], Takashi Nishihara[1], Andreas Dernfalk[2], Igor Gutman[2]
[1]Central Research Institute of Electric Power Industry, Japan; [2]STRI, Sweden; kohei-y@criepi.denken.or.jp

Oral Session OE3: Monitoring and Diagnostics

Time: Wednesday, 30/Aug/2017: 9:00am - 10:30am · *Location:* Multi-Purpose Salon
Session Chair: Uwe Schichler
Session Chair: Issouf Fofana

PD APPROACH FOR ON-LINE PD MONITORING OF CABLE SYSTEMS USING THE MINIMUM NUMBER OF PD SENSORS

Fernando Garnacho[1], Javier Ortego[2], Miguel Ángel Sánchez-Urán[3]
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UHF Characteristics of Silent Discharges

Seyed Amir Mahmood Najafi[1,2], Hassan Saadati[2], Peter Werle[2], Ernst Gockenbach[2], Hosein Borsi[2]
[1]Senvion GmbH, Germany (Department of Product and Technology); [2]University of Hannover, Germany (Division of High Voltage Engineering and Asset Management, Schering-Institute); mahmood.najafi@senvion.com

Simulation and measurement of PD in the UHF frequency range - studies in time and frequency domain

Michael Hartje[1], Peter Werle[2], Marius Huntke[1], Mohammad Akbari Azirani[2], Sören Peik[1]
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MONITORING OF PARTIAL DISCHARGES THROUGH FIBEROPTIC SENSORS IN MEDIUM VOLTAGE SWITCHGEAR

Yasir Hussain Malik, Moritz Kölling, Thomas Gräf, Matthias Menge
HTW Berlin, Germany; koelling@htw-berlin.de

Attribute Extraction and Sensitivity Analysis for Classification of Polymeric Insulators Ultraviolet Images

Kal-El Basílio Brito[1], Edson Guedes da Costa[2], Antonio Barbosa de Oliveira Neto[1], Marcus Tulius Barros Florentino[1,3], Bruno Albuquerque Dias[1], Tarso Vilela Ferreira[4]
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Continuous condition monitoring of high voltage transformers by direct sensor monitoring of oil aging

Manfred Mauntz, Jörn Peuser
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Poster Session PC4: HV testing techniques

Time: Wednesday, 30/Aug/2017: 9:00am - 10:30am · *Location:* Foyer 2

ATMOSPHERIC AND ALTITUDE CORRECTION METHODS FOR AIR GAPS AND CLEAN INSULATORS – CORRECTIONS FOR SHORT GAPS UNDER DC AND APPLICATION DIFFICULTIES – PART 2

Johannes Georg Rickmann[1], Dragan Tabakovic[2], Cuthbert Nyamupangedengu[3], Nishant Parus[3], Dong Wu[4], Ricardo Diaz[5]

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Evaluation of breakdown test procedures for self-restoring insulation types

Dennis van der Born[1], Johan J. Smit[2]

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A Method to Measure Time Constant of Broadband Low Resistance Shunt

Jiafu Wang[1], Yang Pan[2], Haiming Shao[1]

[1]National Institute of Metrology, China; [2]Shanghai Institute of Measurement and testing technology, China; jiafu.wang@nim.ac.cn

Analysis of Test Conditions for the Short-Time withstand Current and Peak withstand Current of the AC High Voltage Switchgear

Guang-wei Fan[1], Shi Huang[2], Ming-song Ji[3], Yu-qiang Shi[4]

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Electrical Measurements and Photgraphic Acquisition of Pre-Discharges on Long Rod-Rod Air Gaps under Lightning Impulse Voltage

Akif Gürlek[1], Ali Shirvani[2], Wolfgang Schufft[1]

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Selection of Entropy based mother-wavelet and level dependent threshold techniques for De-noising of Partial Discharge signals

Arunjothi Rajendran[1], Meena K.P[2], Nageshwar Rao Burjupati[3]

[1]CENTRAL POWER RESEARCH INSTITUTE, India; [2]CENTRAL POWER RESEARCH INSTITUTE, India; [3]CENTRAL POWER RESEARCH INSTITUTE, India; nagesh@cpri.in

Design of Rotating Wheel Dip Test System for Standard Tracking and Erosion Testing of Polymeric Insulators

Joni V Kluss, Jeremy Hamilton

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DECONVOLUTION AND NOISY SIGNALS IN HIGH VOLTAGE MEASUREMENTS

Bruno Ahumada[1], Adolfo Parellada[1], José Silva[1], Ricardo Diaz[1,2]

[1]National University of Tucuman, Argentine Republic; [2]CONICET, Argentine Rep.; labat@herrera.unt.edu.ar

Poster Session PF1: HV Systems

Time: Wednesday, 30/Aug/2017: 9:00am - 10:30am · *Location:* Foyer 1

Using Support Vector Machine Algorithm to achieve Insulation Defect Pattern Recognition of GIS

Guopei Wu, Guojun Lu, Jun Xiong, Sen Yang, Yuquan Liu, Lin Gan, Kai Zhou
Guangzhou Power supply Bureau, China, People's Republic of; wugp@guangzhou.csg.cn

RESEARCH ON ELECTROMAGNETIC COMPATIBILITY TEST OF SMART HIGH-VOLTAGE SWITCHGEAR

Nan Jiang, Lu Wang, Yue Shen, Hailong Zhang, Ling Wu, Yu Zhao
Xi'an High Voltage Apparatus Research Institute Co.,Ltd., China, People's Republic of; jiangnan@xihari.com

Sensitivity Analysis of Cable Oscillating Wave Test System on Multi-source defects Diagnostics

Lin Gan[1], Guojun Lu[1], Jun Xiong[2], Guopei Wu[1], Yuquan Liu[1], Qianwen Guo[2], Wenxiong Mo[2], Wangwei Ji[2]
[1]Guangzhou Power Supply Bureau Co.; [2]Electric Power Test and Research Institute of Guangzhou Power Supply Bureau Co; ganl@guangzhou.csg.cn

Analytical calculation of the thermal impedance of soil under various boundary conditions and configurations to enhance current ratings of buried power transmission and distribution cable systems

Constantin Balzer[1], Christoph Drefke[2], Markus Schedel[2], Volker Hinrichsen[1], Ingo Sass[2]
[1]High Voltage Laboratories, TU Darmstadt, Germany; [2]Applied Geothermal Science and Technology, TU Darmstadt, Germany; balzer@hst.tu-darmstadt.de

Influence of the Conductor Surface on OHL Audible Noise Under Foul Weather Conditions

Oliver Pischler, Uwe Schichler
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RESEARCH ON THE CONVERSION OF POLARIZATION/DEPOLARIZATION CURRENT AND FREQUENCY DOMAIN SPECTROSCOPY FOR XLPE CABLE SPECIMENS

Xuefeng Zhao[1], Lu Pu[1], Zhihua Zhang[1], Jian Liu[1], Xing Zhang[2], Long Xu[2], Aixuan Zhao[2], Junbo Deng[2], Guan-Jun Zhang[2]
[1]State Grid Shaanxi Electric Power Research, Xi'an, China; [2]Xi'an Jiaotong University, Xi'an, China; gjzhang@xjtu.edu.cn

Performance Review of Pilot Transmission Lines Using Silicon Rubber Insulators in Libya

Fathi Salem Abouzakhar[1], Teeret F. Abouzakhar[2]
[1]Zawia University, Libya; [2]Alkhalig Faculty, Libya; abouzakharfs@zu.edu.ly

Improved Design of Grounding Transformer to Facilitate Partial Discharge Online Test

Zhong Zheng, Yuanzhao Han, Meng Sun
North China Electric Power University, China, People's Republic of; zhong.zheng@ncepu.edu.cn

Oral Session OD6: Advanced Materials & Insulation

Time: Wednesday, 30/Aug/2017: 11:00am - 12:30pm · *Location:* Aula Magna
Session Chair: Maks Babuder
Session Chair: Michael Schueller

Controlling Breakdown Charge for Conditioning Procedure in Vacuum under Non-uniform Electric Field

Hiroki Kojima[1], Masashi Noda[1], Kosuke Hasegawa[2], Masayuki Sakaki[2], Naoki Hayakawa[1]
[1]Nagoya University, Japan; [2]MEIDENSHA CORPORATION, Japan; kojima@nuee.nagoya-u.ac.jp

Development and Design of a Compact and Mobile Oil Drying and Degassing System

Mirnes Aganbegovic, Peter Werle
University of Hannover, Germany; mirnes.aganbegovic@ifes.uni-hannover.de

Electrode Material Dependence of Vacuum Breakdown Initiation Process

Yuki Inada[1], Shotaro Yamaguchi[2], Hiroyuki Nagai[2], Shigeyasu Matsuoka[2], Akiko Kumada[2], Hisatoshi Ikeda[2], Kunihiko Hidaka[2], Mitsuaki Maeyama[1]
[1]Saitama University, Japan; [2]The University of Tokyo, Japan; inada@mail.saitama-u.ac.jp

Internal Breakdown Voltage of Vacuum Interrupters with Shield Potential Control

Yusuke Nakano, Benjamin Surges, Volker Hinrichsen
Technische Universität Darmstadt, Germany; nakano@hst.tu-darmstadt.de

Switching performance of alternative gaseous mixtures in high-voltage circuit breakers

Branimir Radisavljevic, Patrick Stoller, Charles Doiron, Daniel Over, Anna Di-Gianni, Saskia Scheel
ABB Corporate Research, Switzerland; branimir.radisavljevic@ch.abb.com

Oral Session OE4: Monitoring and Diagnostics

Time: Wednesday, 30/Aug/2017: 11:00am - 12:30pm · *Location:* Multi-Purpose Salon
Session Chair: Issouf Fofana
Session Chair: Uwe Schichler

The Influence of Measurement Duration and Frequency Range on the Accuracy of Dielectric Response Analysis

Maik Koch[1], Martin Anglhuber[2]
[1]University of Applied Sciences Magdeburg, Germany; [2]Omicron Energy Solutions, Austria; maik.koch@hs-magdeburg.de

A NOVEL CONVERTER FOR OPTICAL PD MEASUREMENT WITH OUTPUT AS ELECTRICAL CHARGE PROPORTIONAL TO LIGHT INTENSITY

Daniel Pepper[1], Inna Kübler[1], Christian Popielarz[1], Ronald Plath[2]
[1]Beuth University of Applied Sciences, Germany; [2]HPS Berlin GmbH, Germany; inna.kuebler@beuth-hochschule.de

A STUDY OF OIL-PAPER INSULATION VOLTAGE DEPENDENCY DURING FREQUENCY RESPONSE ANALYSIS

Diego M. Robalino[1], Jialu Cheng[2], Peter Werelius[3], Raul Alvarez[4]
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ONLINE OIL MONITORING ON POWER TRANSFORMERS - INVESTIGATIONS ON TECHNICAL AND ECONOMICAL REQUIREMENTS -

Mohammad Taghi Imani[1], Peter Werle[1], Andreas Kurz[2], Juergen Schuebel[2]
[1]Leibniz Universität Hannover, Institute of Electric Power Systems, Division of High Voltage Engineering and Asset Management, Schering-Institute, Germany; [2]Messko GmbH, Germany; imani@ifes.uni-hannover.de

Results of a Standardized Survey about the Reliability of Power Transformers

Stefan Tenbohlen[1], Farzaneh Vahidi[1], Janine Jagers[2]
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Measurement of high voltage transients related to power quality for trouble-shooting application, using no invasive three phase electrical field probes.

Juan Carlos Martinez Magdaleno[1], Maurilio Ramirez Leon[2], Alfonso Rivera Rosas[1], Perla Edith Corona Perez[1]
[1]COMISION FEDERAL DE ELECTRICIDAD, Mexico; [2]Consultant; carlos.martinez17@hotmail.com

Poster Session PE1: Monitoring and Diagnostics

Time: Wednesday, 30/Aug/2017: 11:00am - 12:30pm · *Location:* Foyer 2

Basic Study on Applying a New Partial Discharge Diagnosis Method to Capacitor Voltage Transformer

Tatsuya Mutakamihigashi[1], Sho Okada[2], Hideki Ueno[2]
[1]Kanden Engineering, Japan; [2]University of Hyogo, Japan; t-mutakamihigashi@kanden-eng.co.jp

Development of sensor for studying the effect of temperature on power transmission using High Voltage line

Atulya Mishra, Sundara Rajan Jagannathan
Central Power Research Institute, India; er.atulya@gmail.com

NEED OF STANDARDIZED ADHESION TEST FOR COMPOSITE INSULATORS: LESSONS LEARNED FROM SERVICE EXPERIENCE AND TESTING

Igor Gutman[1], Johan Lundengård[1], Claes Ahlrot[2]
[1]STRI AB, Sweden; [2]E.ON Elnät Sverige AB, Sweden; igor.gutman@stri.se

Probabilistic Risk Evaluation of Contamination Flashover of Ceramic Insulators

Koya Ishikawa[1], Yoshimasa Fukuhara[1], Yukio Mizuno[1], Motohiro Maeda[2], Kuniaki Kondo[2], Tomohiro Hayashi[2]
[1]Nagoya Institute of Technology, Japan; [2]NGK Insulators, Ltd., Japan; 28413011@stn.nitech.ac.jp

Voltage and frequency dependence of the dielectric loss factor measurement on XLPE-insulated medium voltage cables

Suleiman Hadid, Ghasem Nourirad, Marcus Kühnert, Wolfgang Schufft
Chemnitz University of Technology, Germany; suleiman.hadid@etit.tu-chemnitz.de

Partial Discharge Characteristics for Interfacial Electrical Treeing Model in Pre-Moulded Joint for XLPE cables

Sung Ho Yoon, Dae Hoon Kim, Jeong Tae Kim
Daejin University, Korea, Republic of (South Korea); jtkim@daejin.ac.kr

SOLAR RADIATION AND AMBIENT TEMPERATURE INFLUENCE ON ELECTROTHERMAL BEHAVIOR OF A POLYMERIC SURGE ARRESTER

Arthur Francisco Andrade[1], Helem Monyelle de Melo Alves[2], Edson Guedes Costa[3], André Dantas Germano[3], Pedro Sampaio Matias[2]
[1]Post Graduation in Electrical Engineering - UFCG, Brazil; [2]Electrical Engineering Graduation Program - UFCG, Brazil; [3]Electrical Engineering Department - UFCG, Brazil; arthur.andrade@ee.ufcg.edu.br

New approaches to the condition assessment of damage accumulation in XLPE-insulated medium voltage cables

Suleiman Hadid[1], Kai Jacob[1], Wolfgang Schufft[1], Tino Noske[2]
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Poster Session PF2: HV Systems

Time: Wednesday, 30/Aug/2017: 11:00am - 12:30pm · *Location:* Foyer 1

The Relevance Relation between Meteorological Activities Parameters and Lightning Stroke Fault of Transmission Line in Frequent Lightning Activities Area

Yuquan Liu, Guojun Lu, Jun Xiong, Jiahong Chen, Xuefang Tong, Shangqiang Gu, Mianzhi Chen
Guangzhou Power supply Bureau, China, People's Republic of; liuyq@guangzhou.csg.cn

Utility Risk Linked Asset Management - Practical Application on Power Transformers

Ravish P.Y. Mehairjan[1], Johan J. Smit[2]
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A CHALLENGING CASE OF OVERHEAD TRANSMISSION LINE LIGHTNING PERFORMANCE IMPROVEMENT BY MEANS OF LINE SURGE ARRESTER INSTALLING

Miha Becan[1], Maks Babuder[1], Bostjan Barl[2], Bojan Volk[2], Goran Milev[1], Jure Praznik[2]
[1]Milan Vidmar Electric Power Research Institute, Slovenia; [2]ELES, Slovenia; miha.becan@eimv.si

Probabilistic Estimation of Risk of Failure of a 1200 kV UHVAC Transmission Line

Ramchandra Reddy Annadi, Dr.P.Chandra Sekhar Pasta
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Improving Network Reliabilty by Performing Electrical Design Reviews for Pole and Ground Mounted Distribution Transformers

Adesh Singh[1], Andrew Swanson[2]
[1]Eskom/ University of Kwazulu Natal, South Africa; [2]University of Kwazulu Natal, South Africa; adeshs@gmail.com

Impact Analysis of Biological Pollution on Glass Insulators

Bruno Albuquerque Dias[1], Edson Guedes da Costa[2], André Dantas Germano[2], Tarso Vilela Ferreira[3], Kal-El Basílio Brito[1], Lenilson Andrade Barbosa[1], Alfredo Irineu da Silva Neto[1], Jennefer Kelly Pequeno da Silva[1], Ricardo C. Bezerra[4], Sirney Silveira[5], Rosildo S. Paiva[6], Darcy Ramalho Mello[7]
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Asset individual optimization of maintenance and replacement strategies in transmission systems

Alexander Rhein, Gerd Balzer, Philipp von Wallbrunn, Christina Fuhr
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Simulating Calculations of Transient Voltage on Insulating Sheath Along A Long-Distance 500kV XLPE Submarine Cable

Shijie Xiao[1], Hao Liu[2], Xuezhong Liu[2], Liexiang Hu[3], Shaohua Wang[3], Dai Cao[2]
[1]State Grid Zhejiang Electric Power Company,China, People's Republic of; [2]Xi'an Jiaotong University, China, People's Republic of; [3]State Grid Zhejiang Electric Power Research Institute, People's Republic of; xliu@mail.xjtu.edu.cn

Oral Session OE5: Monitoring and Diagnostics

Time: Wednesday, 30/Aug/2017: 2:00pm - 3:30pm · *Location:* Multi-Purpose Salon
Session Chair: Peter Werle
Session Chair: Masahiro Sato

A Study on the effect of moisture on paper insulation impregnated with mineral oil and ester oil using Frequency Domain dielectric Spectroscopy (FDS).

Manas Ranjan Patra[1], Nageshwar Rao Burjupati[2]
[1]CENTRAL POWER RESEARCH INSTITUTE, India; [2]CENTRAL POWER RESEARCH INSTITUTE, INDIA;
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Investigation on aging markers of thermally accelerated aged oil-impregnated papers

Tobias Kinkeldey, Peter Werle, Tobias Münster
Leibniz University Hannover, Germany; tobias.kinkeldey@ifes.uni-hannover.de

New Method for Measuring the Solubility of Gases in Insulation Liquids

Mohammad Imani, Moritz Kuhnke, Mohsen Farahani, Peter Werle
Leibniz University Hannover, Germany; Kuhnke@ifes.uni-hannover.de

DETECTION OF FAULTS IN POWER TRANSFORMERS USING FREQUENCY RESPONSE ANALYSIS AND TIME-FREQUENCY TRANSFORMATIONS

Pamela Mariana Vaca Vargas, Enrique Esteban Mombello
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Experimental investigations on the behavior of partial discharges in dry type transformers as a function of temperature and voltage stress

Hassan Saadati[1], Seyed Amir Mahmood Najafi[1,2], Hedieh Movagharnejad[3], Ulrich Schiefelbein[2], Peter Werle[1]
[1]University of Hannover, Germany (Division of High Voltage Engineering and Asset Management, Schering-Institute); [2]Senvion GmbH, Germany (Department of Product and Technology); [3]University of Hannover, Germany (Institute for Drive System and Power Electronics); saadati@ifes.uni-hannover.de

Total harmonic distortion (THD) considerations for high voltage AC test systems using a static frequency converter front-end in combination with a high voltage test transformer

Michael Gamlin, Christoph Rytz
Haefely Test AG, Switzerland; gamlin.michael@haefely.com

Oral Session OF1: HV Systems

Time: Wednesday, 30/Aug/2017: 2:00pm - 3:30pm · *Location:* Aula Magna
Session Chair: Zdenka Benesova
Session Chair: Thavenesen Govender

Bundle Conductor Geometry Optimization for Reducing Audible Noise of Overhead Power Lines

Oliver Pischler, Uwe Schichler
Graz University of Technology, Austria; oliver.pischler@tugraz.at

CONSIDERATION TO USE HIGH SIL LINES VERSUS SERIES COMPENSATION IN HIGH VOLTAGE POWER TRANSMISSION LINES

Tumisang Penelope Maphumulo[1], Rob Stephen[1], John Van Coller[2]
[1]ESKOM, South Africa; [2]University of the Witwatersrand; MAPHUMTP@ESKOM.CO.ZA

Detection of poor conductive clothing by a new way of inspection

Gábor Göcsei, Bálint Németh, István Berta
Budapest University of Technology and Economics, Hungary; nemeth.balint@vet.bme.hu

Dynamic Thermal Rating of power lines – improved model and measurements in rainy conditions

Vladimir Djurica[1], Gregor Kosec[2], Miloš Maksić[1]
[1]Electroinstitute Milan Vidmar, Slovenia; [2]Jožef Stefan Institute; vladimir.djurica@eimv.si

Insulation Performance of GIS Operating Under Tropical Conditions

Andreas Putro Purnomoadi[1], Armando Rodrigo Mor[2], Johan J. Smit[2]
[1]PLN, Indonesia; [2]Delft University of Technology, the Netherlands; a.p.purnomoadi@tudelft.nl

Transient Behavior of High Surge Impedance Loading Transmission Lines

Jhair Stivel Acosta Sarmiento, M.Cristina Tavares
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Poster Session PE2: Monitoring and Diagnostics

Time: Wednesday, 30/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 2

Influence of load variations on PD-characteristics of MV-cable joints

Kai Jacob[1], Suleiman Hadid[1], Wolfgang Schufft[1], Thomas Gurski[2]
[1]Chemnitz University of Technology, Germany; [2]MITNETZ STROM Ltd. (RWE Group); kai.jacob@s2010.tu-chemnitz.de

Simulation and Detection of Series Arcing Faults in More Electric Aircraft Power System

Jun Jiang[1,2], Wenxin Cheng[1], Guowang Huang[1], Chaohai Zhang[3], Xiao Han[1], Zhuowei Wang[1]
[1]College of Automation Engineering, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, China; [2]Center for More-Electric-Aircraft Power System, Nanjing University of Aeronautics and Astronautics, Nanjing 211106, China; [3]State Grid Electric Power Research Institute, Wuhan 430074, China; jiangjun0628@nuaa.edu.cn

Selection of Preventive Diagnostics to Reduce Risk of Failure for Gas Insulated Switchgear

Muhannad Al-Suhaily[1], Sander Meijer[2], Johan J. Smit[2]
[1]DNV GL; [2]Delft University of Technology; Sander.Meijer@dnvgl.com

IMPACT OF SUPERIMPOSED DIRECT AND 50 HZ ALTERNATING HIGH VOLTAGE STRESS ON CURRENT AND VOLTAGE DISTRIBUTION ALONG SURGE ARRESTERS

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INTERPRETATION OF APPARENT SOIL RESISTIVITY AND STRATIFICATION WITH SCHLUMBERGER ARRANGEMENT

Fernando Moreira Viana, Antônio César Baleeiro Alves
Universidade Federal de Goiás, Brazil; fernandomviana@hotmail.com

MAINTENANCE STRATEGIES OF TRANSMISSION TOWERS ON THE PERUVIAN COAST AFFECTED BY SALT POLLUTION

Daiana Antonio da Silva[1], Samuel Arturo Asto Soto[2]
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A NEW TYPE OF MICRO CURRENT MEASUREMENT DEVICE FOR DIELECTRIC RESPONSE DIAGNOSIS

Daning Zhang[1], Hanbo Zheng[2], Xiaoshi Kou[2], Yuquan Li[2], Yingbiao Shao[2], Jie Tian[3], Peng Yu[3], Guanjun Zhang[1]
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Pulse Waveform, Phase-Resolved and Pulse Sequence Analysis of Partial Discharges during electrical tree growth in epoxy resin

Roger Schurch, Luis Orellana, Pablo Donoso, Jorge Ardila-Rey, Johny Montana
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Poster Session PF3: HV Systems

Time: Wednesday, 30/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 1

Distribution Characteristics of the Dielectric Loss and Capacity Incremental Values for Transformer Oil Bushings

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Overvoltages Control Using Surge Arresters for 220 kV Power Transmission lines and Insulation Coordination

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DC AND IMPULSE BREAKDOWN CHARACTERISTICS OF SMALL GAPS IN ENGINE FLUE GAS

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Application of innovative equipment during high voltage live-line maintenance

Bálint Németh, Gábor Göcsei, József Meixner, Bálint Gergely Halász, István Kiss
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Investigation of the use of an overvoltage limiter device in the European high voltage grid

Bálint Gergely Halász, Gábor Göcsei, Bálint Németh, István Berta
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Insulator pollution mapping of the northern region of the Indian power system

Sudalai Shunmugam S[1], Vasudev N[1], Krishna Kumar M[2], Bhowmick B N De[2], Sunkara Roa B R[2]
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Voltage distribution across a string insulator- Theoretical and Practical study

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Research on Transformer Renewal Strategy based on Life Cycle Theory

Lin Gan, Yuquan Liu, Guopei Wu, Qiong Wu, Junwei Diao
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Poster Session PE3: Monitoring and Diagnostics

Time: Wednesday, 30/Aug/2017: 4:00pm - 5:00pm · *Location:* Foyer 2

Sensitivity assessment of the power ratio maps due to variation of internal defects in solid insulation

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EVALUATION OF WATER CONTENTS WHITHIN INSULATING PAPERS USED FOR THE CONSTRUCTION OF ACCESSORIES ON OF CABLES

Pablo Morcelle del Valle, Raúl Emilio Álvarez, Leonardo Javier Catalano, Emilio Calo
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The dielectric losses of medium voltage cable accessories and their influence on on-site dissipation factor measurements on XLPE-insulated medium voltage cable lines

Georg Frübing[1], Ronald Plath[2], Wilfried Kalkner[3], Thomas Kumm[4], Vladimir Stamenkovic[5]
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Partial discharge characteristics of thermally aged paper oil insulation under copper corrosion

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DISTRIBUTED CIRCUIT OF A BLACK-BOX POWER TRANSFORMER FOR SIMULATION BASED FREQUENCY RESPONSE ANALYSIS

N.T. Tran[1], T.P. Nguyen[1], D.L. Ho[1], B.K. Nguyen[2], D.A.K. Pham[3]
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Application of Prime and G3-PLC Power Line Communication Standards on Transmission Networks

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UHF Partial Discharge Localization Algorithm Based on Reconstructed RSSI Fingerprint

Zhen Li[1], Lingen Luo[1], Gehao Sheng[1], Xiuchen Jiang[1], Hui Huang[2], Yun Liang[2]
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Online Insulation Monitoring System for Gas Insulated Transformer

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Poster Session PG1: HVDC Technology

Time: Wednesday, 30/Aug/2017: 4:00pm - 5:00pm · *Location:* Foyer 1

STUDY ON THE REQUIRED CREEPAGE DISTANCE FOR HVDC EQUIPMENT AT INDOOR CONDITIONS

Dong Wu[1], Urban Åström[1], Igor Gutman[2]
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Converter transformer bushing external insulation design

Alberto Pigini[1], Paolo Cardano[2], Milorad Sehovac[1], Giovanni Testin[2], Pietro Valvassori[2]
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INNOVATIVE POLLUTION AND ICE TESTING OF DC COMPOSITE INSULATORS FOR ±525 KV DC LINE

Bjarni Thorsteinsson[1], Kjell Halsan[1], Marina Gullo[2], Igor Gutman[2]
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Electric Field Analysis and Electrical Insulation Performance for Gas-Solid Composite Insulation in HVDC-GIS

Ryuichi Nakane[1], Kyohei Takabayashi[1], Katsumi Kato[2], Hitoshi Okubo[1]
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HVDC Partial Discharge and Surface Charging on Solid Insulator and Charge Supply Source Characteristics in Air

Kyohei Takabayashi[1], Ryuichi Nakane[1], Katsumi Kato[2], Hitoshi Okubo[1]
[1]Aichi Institute of echnology, Japan; [2]National Institute of Technology, Niihama Collage, Niihama, Japan;
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Investigations on the influence of electron emission at bare metal electrodes on the capacitive-resistive transition in gas insulated DC systems

Thomas Götz[1], Maria Hering[1], Joachim Speck[1], Karsten Backhaus[1], Steffen Grossmann[1], Uwe Riechert[2]
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Investigation and Recommendation on 1000 h Salt Fog Test of Large-diameter Composite Insulators under DC Voltage

Xidong Liang[1], Shaohua Li[1], Yanfeng Gao[4], Bing Luo[2], Fuzeng Zhang[2], Yifan Liao[2], Jiafu Wang[3]
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A STUDY ON TRACKING AND EROSION RESISTANCE OF SILICONE RUBBER DURING DC INCLINED PLANE TRACKING WITH UV RADIATIONS SUPER IMPOSED

PN Ashitha, S Ganga
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Oral Session OE6: Monitoring and Diagnostics

Time: Thursday, 31/Aug/2017: 9:00am - 10:30am · *Location:* Multi-Purpose Salon
Session Chair: Stefan Tenbohlen
Session Chair: István Kiss

Analysing mechanical aging behavior of the electrical insulation system used in rotating machines

Alessandro Cimino[1], Christian Staubach[2], Frank Jenau[1]
[1]TU Dortmund University, Germany; [2]Siemens AG, Muelheim, Germany; alessandro.cimino@tu-dortmund.de

Field diagnosis on transformers for wind turbine applications

Andreas Thiede[1], Robert Nowak[1], Frank Busse[2]
[1]HIGHVOLT Prüftechnik Dresden GmbH, Germany; [2]IPH Institut "Prüffeld für elektrische Hochleistungstechnik" GmbH; thiede@highvolt.de

NEW DGA SENSOR FOR POWER TRANSFORMERS SEALED BY GAS CUSHION

Mohammad Akbari Azirani[1], Mohsen Farahani[1], Moritz Kuhnke[1], Peter Werle[1], Wolfgang Sorgatz[2]
[1]Leibniz Universität Hannover, Germany; [2]ENERGY Support GmbH, Germany; azirani@ifes.uni-hannover.de

Research on transformer fault early warning based on infrared image recognition

Yuan Zhou, Zheng Zhong, Qi Wang
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HVDC GIS/GIL - PD identification by NoDi* pattern

Alexander Pirker, Schichler Uwe
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Performance of standard HFCT (high frequency current transformer) at UHF (ultra high frequency) for partial discharge detection

Daniel Götz[1], Hein Putter[1], Frank Petzold[1], Ricardo Puig[2]
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Oral Session OG1: HVDC Technology

Time: Thursday, 31/Aug/2017: 9:00am - 10:30am · *Location:* Aula Magna
Session Chair: Andreas Kuechler
Session Chair: Alberto Pigini

ARE SHIELDING ELECTRODES NECESSARY FOR HVDC LINE INSULATORS?

Alberto Pigini[1], Roberto Brambilla[2], Giovanni Pirovano[3]
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Experimental Validation of the Charge Carrier-based Modelling of Oil-Paper Insulations at high DC Voltage Stress

Tobias Gabler[1], Karsten Backhaus[1], Joachim Speck[1], Steffen Grossmann[1], Ronny Fritsche[2]
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Requirements on Solid Insulating Materials and Gas-solid Interfaces in Compact HVDC Gas-insulated Systems

Maria Hering[1], Karsten Juhre[1], Maximilian Secklehner[2], Volker Hinrichsen[2]
[1]Siemens AG, Germany; [2]TU Darmstadt, Germany; maria.hering@siemens.com

Measurements and calculations of critical thermal and electrical stress conditions for HVDC bushings

Isabell Wirth[1], Nadja Heßdörfer[1], Markus H. Zink[1], Andreas Küchler[1], Achim Langens[2], Frank Berger[3]
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Identification and Classification of faults in DC cables

Younes Norouzi[1], Christian Frohne[1], Volker Gauler[1], Mirnes Aganbegovic[2], Peter Werle[2], Hanno Stagge[3]
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Poster Session PE4: Monitoring and Diagnostics

Time: Thursday, 31/Aug/2017: 9:00am - 10:30am · *Location:* Foyer 2

Evaluation of aged ceramic insulators from distribution lines

Darcy Ramalho de Mello
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MINIMIZING DIELECTRIC TESTING TIME

Martin Anglhuber, Friedrich Kaufmann, Sebastian Knütter
OMICRON, Austria; martin.anglhuber@omicronenergy.com

Materials based lifetime assessment of porcelain insulators

Jan Schulte-Fischedick[1], Jens M. Seifert[1], Sadik Bin Nizam[1], Pascal Hettich[2], Karl G. Schell[2], Michael J. Hoffmann[2], Wolfgang Marthen[3], Heinrich Wekenborg[3], Heinrich Pohlmann[3], Fabian Lehretz[1]
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Analysis of SF6 decomposition products under two types of partial discharges

Huixuan Shi[1], Chaohai Zhang[1], Kun Zhao[1], Fuping Zeng[2], Ju Tang[2]
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Proposal and Evaluation of a Technique Based on Ultrasound for Composite Insulator Monitoring

Marcus Tulius Barros Florentino[1,3], Edson Guedes da Costa[2], Tarso Vilela Ferreira[4], Kal-El Basílio Brito[1], Bruno Albuquerque Dias[1], Renata Garcia Dutra de Oliveira[1], André Dantas Germano[2]
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Influence of Moisture on Partial Discharge Characteristics of Oil Impregnated Pressboard under Non-uniform Field

Muhammed Faisal Rahman[1], Nageshwar Rao Burjupati[1], Pradeep M Nirgude[2], Thirumurthy S[1]
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A study on electrically induced thermal effects on dielectric parameters of paper oil insulation in presence of DBDS

Daisy Flora Selvaraj, Sundara Rajan Jagannathan
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A Study on Relationship between PD Waveforms in HF and UHF Bands

Asghar Akbari Azirani[1], Hamid Jahangir[1], Peter Werle[2], Mohammad Akbari Azirani[2], Janusz Marian Szczechowski[3]
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Poster Session PG2: HVDC Technology

Time: Thursday, 31/Aug/2017: 9:00am - 10:30am · *Location:* Foyer 1

Temperature dependence of partial discharge under AC and combined AC/DC field stress

Hassan Saadati[1], Jens Martin Seifert[2], Peter Werle[1], Ernst Gockenbach[1]
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Environmental Influence on Corona Inception with HVDC Application

Jules Simplice Djeumen, Jerry Walker
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DEVELOPMENT AND INSTALLATION OF A TEST CIRCUIT FOR THE REPRODUCTION OF ELECTRIC FIELDS FROM HIGH VOLTAGE DIRECT CURRENT TRANSMISSION LINES IN AN EXPOSURE CHAMBER

Thomas Krampert[1], Marius Stoffels[1], Artur Mühlbeier[1], Henning Frechen[1], Armin Schnettler[1], Dominik Stunder[2]
[1]Institute for High Voltage Technology, RWHT Aachen University, Germany; [2]Research Center for Bioelectromagnetic Interaction, RWTH Aachen University; frechen@ifht.rwth-aachen.de

LEAKAGE CURRENT AND FLASHOVER ONSET WITH VARIOUS CONDUCTIVITIES ON HVDC GLASS INSULATORS

Morne Roman[1], Robert van Zyl[1], Nishanth Parus[2], Nishal Mahatho[2]
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The Effect of Altitude, Temperature and Humidity on Corona Inception and Audible Noise under HVDC Stress

Nishanth Parus[1,2], Nishal Mahatho[1,2], Thavenesen Govender[1,2], Ian Jandrell[2], Riaan H.A Roets[3]
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A COMPARISON OF LEAKAGE CURRENTS ON A GLASS AND A POLYMERIC INSULATOR IN-SITU UNDER HVDC VOLTAGE STRESS

Nishal Mahatho[1,2], Nishanth Parus[1,2], Thavenesen Govender[1,2], Ian Jandrell[1], Matimba Mathebula[2], Lerato Motsei[2]
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Measurement of Ionic Current And Electric Fields Under HVDC Transmission Lines

Thavenesen Govender[1,2], Nishanth Parus[1,2], Nishal Mahatho[1,2], Ian Jandrell[2], Vernon Avis[1], Robert van Zyl[3]
[1]Eskom Holdings SOC LTD, Johannesburg, South Africa; [2]University of the Witwatersrand, Johannesburg, South Africa; [3]Cape Peninsula University of Technology, Cape Town, South Africa; govendta@eskom.co.za

GROUNDING DESIGN OF AN HVDC SYSTEM

José Crisanti, Carlos Eduardo Requena, Raúl Roberto Villar, Ricardo Crivicich
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Oral Session OE7: Monitoring and Diagnostics

Time: Thursday, 31/Aug/2017: 11:00am - 12:30pm · *Location:* Multi-Purpose Salon
Session Chair: István Kiss
Session Chair: Stefan Tenbohlen

Influence of Winding Geometrical Deviations on the Hot Spot Temperature in a Disc Type Power Transformer

Muhammad M. M. Daghrah[1], Zhongdong Wang[1], Qiang Liu[1], Christoph Krause[2], Paul Dyer[3], Paul Jarman[4]
[1]The University of Manchester, Manchester, M13 9PL, UK; [2]Weidmann Electrical Technology AG, Rapperswil, CH 8640, Switzerland; [3]UK Power Networks, Crawley, RH10 0FL, UK; [4]National Grid, Warwick, CV34 6DA, UK;
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Online DGA for partial discharge investigation at various PDIV levels and mineral oil temperatures

Wilasinee Wattakapaiboon[1], Michael Mhur[2], Peerawut Yutthagowith[1], Anantawat Kunakorn[1], Norasage Pattadech[1]
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Study on the Fatigue Effect of Transformer Pressboard and its Influence on Winding Mechanical Stability

Xutao Wu[1], Xiuguang Li[1], Fan Zhang[2], Zhiyuan Pan[2], Cao Zhan[2], Shengchang Ji[2]
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Verification of Using Partial Discharge Localization Algorithm Based on Sectional Transfer Functions of Winding

Mahdi Rahimbakhsh, Peter Werle, Ernst Gockenbach
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Influence of harmonic voltage on characteristics of partial discharge in oil-paper insulation at HVDC converter transformer

Yanjie Cui[1], Xining Li[1], Pei Cao[1], Shengchang Ji[1], Lingyu Zhu[1], Xiang Sun[2], Yiming Zheng[2]
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Intelligent Classification of ZnO Surge Arresters based on Statistical Parameters obtained from Partial Discharges

Luiz Augusto Medeiros Martins Nobrega, Edson Guedes da Costa, Tarso Vilela Ferreira
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Oral Session OG2: HVDC Technology

Time: Thursday, 31/Aug/2017: 11:00am - 12:30pm · *Location:* Aula Magna
Session Chair: Alberto Pigini
Session Chair: Andreas Kuechler

Analysis of Bridging Phenomenon in Mineral Oil and Natural Ester Contaminated with Cellulose Particles under Different DC Electrical Field

Min Dan, Jian Hao, Yanqing Li, Ruijin Liao, Lijun Yang
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Galvanic Coupling of Direct Currents in Transmission Grids and its Effects on Power Transformers

Michael Beltle, Michael Schühle, Stefan Tenbohlen
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Transient voltage stresses in MMC-HVDC links and associated impacts on air clearance calculation

Simon Wenig[1], Claudius Freye[2], Max Goertz[1], Frank Jenau[2], Thomas Leibfried[1]
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Distribution of space charge around conductor line in a small corona cage at various influencing factors

Hongbo Liu[1], Ruijin Liao[1], Qingdai Zhu[2], Kanglin Liu[1], Xuetong Zhao[1]
[1]Chongqing University, Chongqing,China; [2]Electric Power Research Institute, State Grid Electric Power Corporation, Sichuan Chengdu, China; cqulhb@cqu.edu.cn

On the Conduction Process of Dielectric Liquids Based on Mineral Oil

Stephan Harrer, Dotterweich Christian, Markus H. Zink, Juergen Hartmann
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Poster Session PE5: Monitoring and Diagnostics

Time: Thursday, 31/Aug/2017: 11:00am - 12:30pm · *Location:* Foyer 2

Study of the AC surface discharge characteristics of insulation samples using the UHF method

Febri Nugraha, Noureddine Harid, Huw Griffiths, Braham Barkat, Naji Al Sayari
Petroleum Institute, United Arab Emirates; nharid@pi.ac.ae

Condition assessment of distribution grids combining measurement methods and theory of evidence

Christopher Johae, Dr.-Ing. Erik Pawlowski, Dr.-Ing. Dominik Beerboom, Univ.-Prof. Dr.-Ing. Markus Zdrallek
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Decomposition Characteristics of SF6 under Different DC Partial Discharge Strengths Initiated by Needle-Plate Insulation Defect

Tang Nian[1], Yang Xu[2], Tang Ju[2], Yao Qiang[3], Miao Yulong[3], Qiu Ni[3], Zeng Fuping[2]
[1]Electric Power Research Institute of Guangdong Power Grid Co., Ltd., China; [2]School of Electrical Engineering, Wuhan University, China; [3]Chongqing Electric Power Company Electric Power Research Institute, China; 15102738342@126.com

Construction of a Fault location specifying method for the Transmission Line Tower of an Isolated Neutral System

Kenichi Nakatsuka[1], Takashi Kasahara[2], Hiroshi Yonei[2], Masahito Shimizu[1]
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CHARACTERISTICS OF SERIES ARC FAULT AND ITS DETECTING METHOD BASED ON ELECTROMAGNETIC RADIATION SIGNALS

Qing Xiong, Lingyu Zhu, Weifeng Lu, Xiaojun Liu, Yanjie Cui, Shengchang Ji
State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an, China; zhuly1026@xjtu.edu.cn

Using Graph Based Knowledge Representation Approach in Diagnostics of Power Transformer

Stefan Kittan[1], Stefan Kornhuber[1], Peter Kästel[2], Michael Weise[2], Gunnar Nitsche[2], Gerd Valtin[2], Michael Krüger[3], Torsten Friedrich[4], Michael Lukas[5]
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New approach for medium voltage power cable assessment using broadband powerline communications

Nikolai Hopfer[1], Markus Zdrallek[1], Ulrik Dietzler[2], Markus Krampf[2], Christoph Raquet[3], Marilen Ronczka[3], Hamed Rezaei[4]
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CABLE DIAGNOSTIC WITH THE LINE-RESONANCE-ANALYSIS ON AN INVESTIGATED MEDIUM-VOLTAGE-CABLE SIMULATION MODEL

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Poster Session PG3: HVDC Technology

Time: Thursday, 31/Aug/2017: 11:00am - 12:30pm · *Location:* Foyer 1

Determination of single-pole Auto-Reclosing Restart Concept for VSC HVDC with Fault Current Controllability

Maximilian Stumpe, Ralf Puffer, Armin Schnettler, Zhen Shi

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Analysis and Countermeasure of the Large-area Differential Protection Mal-operation of Converter Transformer Caused by Sympathetic Inrush

Wenxiong Mo[1], Qianwen Guo[1], Neng Jin[2], Jun Xiong[1], Yao Liu[2], Hanxian Cai[1], Fangqing Zheng[1], Lin Gan[1], Xiangning Lin[1]

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DEVELOPMENT OF SPECIAL ELECTRODE FOR EXTREME HIGH SWITCHING IMPULSES FOR INDOOR APPLICATION

Liliana Arevalo, Dong Wu

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Effect of Temperature on Flow Electrification Characteristics under DC Voltage

Kai Wu, Jie Dai, Chuanhui Cheng, Yingye Jiang

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Negative DC Partial Discharge Decomposition Characteristics of SF6 under Different Gas Pressure Initiated by Needle-Plate Insulation Defect

Ning Zhu[1], Dong Yang[2], Ju Tang[2], Qiang Yao[3], Yulong Miao[3], Fuping Zeng[2]

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The impact of airborne particulate matter concentration on negative DC ground synthetic electric field in a line to ground configuration

Haibing Li[1], Xingming Bian[1], Tiebing Lu[1], Xiang Li[2], Xuemei Dong[3]

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A novel criterion based on the comparison of components of the phase voltage and the differential current for converter transformer protection in HVDC

Qianwen Guo[1], Neng Jin[2], Wenxiong Mo[1], Jun Xiong[1], Ke Wang[1], Jiawei Xing[2], Hanxian Cai[1], Fangqing Zheng[1], Lin Gan[1], Xiangning Lin[2]

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Development of an adaptive Single-Pole Auto-Reclosing Concept for VSC HVDC with Fault Current Controllability

Maximilian Stumpe, Philipp Tünnerhoff, Ralf Puffer, Armin Schnettler

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Oral Session OE8: Monitoring and Diagnostics

Time: Thursday, 31/Aug/2017: 2:00pm - 3:30pm · *Location:* Multi-Purpose Salon
Session Chair: Masahiro Sato
Session Chair: Peter Werle

Comparative Study of Existing Monitoring and Diagnostic Techniques of Metal-Oxide Surge Arrester

George Rossany Soares Lira, Vandilson Rodrigo Nascimento Barbosa, Cícero Rômulo Campos de Amorim Filho, Suelson Lopes Carvalho Batista, Edson Guedes da Costa
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Identification of Partial Discharges at DC Voltage Using Machine Learning Methods

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Partial Discharge Charge Decay Analysis Using Chopped Sequence

Marek Florkowski[1], Barbara Florkowska[2], Paweł Zydroń[2]
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RESISTIVE CURRENT WAVEFORM AS A TOOL TO IDENTIFY DEGRADED PARTS OF POLYMERIC SURGE ARRESTERS SUBJECTED TO INTERNAL MOISTURE

Daiana Antonio da Silva[1], Kari Lahti[2], José Pissolato Filho[1]
[1]UNICAMP, Brazil; [2]Tampere University of Technology, Finland; kari.lahti@tut.fi

Spectroscopic techniques for temperature measurement of laboratory-generated lightning arcs

David Clark, Daniel Carr, Daniel Mitchard, Chris Stone, Manu Haddad
Cardiff University, United Kingdom; ClarkD@cardiff.ac.uk

Enhancement of the Inspection of Polymeric Insulators by Digital Infrared Image Processing

Renata Garcia Dutra de Oliveira[1], Edson Guedes da Costa[2], Waslon Terllizzie Araújo Lopes[3], Antonio Barbosa de Oliveira Neto[1], Marcus Tulius Barros Florentino[1,4], Girlene Lima Ribeiro[1]
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Oral Session OH1: HV Industrial Applications

Time: Thursday, 31/Aug/2017: 2:00pm - 3:30pm · *Location:* Aula Magna
Session Chair: Michael Muhr
Session Chair: Koo Jayoon

A fast modular pulsed power source for a pulsed electron beam device

Martin Hochberg, Martin Sack, Dennis Herzog, Georg Mueller
Karlsruhe Institute of Technology, Germany; martin.hochberg@kit.edu

DC Electric Field Control of Ending Box-Air (EB-A) Type Outdoor Termination under DC Voltage Stress

Ik-Soo Kwon, Jae-Hong Koo, Ho-Young Lee, Ja-Yoon Koo, Bang-Wook Lee
Hanyang University, Korea, Republic of (South Korea); bangwook@hanyang.ac.kr

Experimental Investigation of Plate Cooling with Ionic Wind from Needle and Wire Electrodes

Ilia Elagin, Pavel Markovskii, Ilia Ashikhmin, Yuri Stishkov
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Investigation of C-chamfering around aperture edge for high voltage holding performance in small electrodes with multi-apertures in vacuum

Tetsuya Okura[1], Yasushi Yamano[1], Atsushi Kojima[2], Ryo Nishikiori[2], Meiko Kashiwagi[2]
[1]Saitama university, Japan; [2]National institutes for Quantum and Radiological Science and Technology, Japan;
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Semiconductor-based Marx Circuit for Soft-Switching Operation

Martin Sack, Dennis Herzog, Johannes Ruf, Martin Hochberg, Georg Mueller
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Micro-processor based modular power supply of high voltage rectangular pulses with rising/falling time in the nano-scale range

Angelos Koliadimas[1], Dimosthenis Apostolopoulos[1], Panagiotis Svarnas[1], Epaminondas Mitronikas[2]
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Poster Session PE6: Monitoring and Diagnostics

Time: Thursday, 31/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 2

Investigation on the impact of thermal stress on a combined 220 kV instrument transformer

Florian Ainhirn, Rudolf Woschitz
Institute of High Voltage Engineering and System Performance, University of Technology Graz, Austria; florian.ainhirn@tugraz.at

RECOGNITION OF THE DEGRADATION LEVEL OF POLYMERIC INSULATORS USING INFRARED RADIATION, STATISTICAL AND ANN

Girlene Lima Ribeiro, Edson Guedes Costa, Camila Pires Gouveia Guedes, Renata Garcia Dutra Oliveira
Universidade Federal de Campina Grande, Brazil; camilapgguedes@gmail.com

Investigating How Temperature and load of High Voltage Generators affect Partial Discharge diagnosing Patterns

Asghar Akbari Azirani[1], Reza Sargazi[1], Mohammad Rahimi[1], Mohsen farahani[2]
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INFLUENCE OF IMPURITIES MOVEMENT ON THE DIELECTRIC STRENGTH OF INSULATING OIL

Arthur Francisco Andrade[1], Edson Guedes Costa[2], Helem Monyelle de Melo Alves[3], André Dantas Germano[2]
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Evaluation of Power Transformer through Information Fusion of Multi-dimensional Data

Yuan Zhou, Zhong Zheng, Qi Wang
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Comparison of Feature Space Formations based on DWT Coefficient Variance for Partial Discharge Classification under different Wavelet families.

Marcos Uriel Maillot[1,2]
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AC Partial Discharge Characteristics and Accumulation Charge after Lightning Impulse in Cast Resin Transformer

Hirofumi Maruyama[1], Masahiro Kozako[1], Masayuki Hikita[1], Tokihiro Umemura[2], Kazuo Iida[2], Yusuke Nakamura[3], Tetsuo Nakamae[4], Teruhiko Maeda[4], Masakazu Higashiyama[4]
[1]Kyushu Institute of Technology, Japan; [2]Mie University; [3]Toshiba Corporation Ltd.; [4]TOSHIBA Industrial Products and Systems Co., Ltd.; m108117h@mail.kyutech.jp

Partial Discharge Severity Assessment in Gas-insulated Switchgear Using Unsupervised Feature Learning Algorithm

Ning Zhu[1], Miao Jin[2], Ju Tang[2], Qiang Yao[3], Yulong Miao[3], Fuping Zeng[2]
[1]Kunming Power Supply Bureau of Yunnan Power Grid Corporation, Kunming, China, People's Republic of; [2]Wuhan University, Wuhan, China, People's Republic of; [3]Chongqing Electric Power Research Institute, Chongqing Power Company, Chongqing, China; 2010302540054@whu.edu.cn

Poster Session PH1: HV Industrial Applications

Time: Thursday, 31/Aug/2017: 2:00pm - 3:30pm · *Location:* Foyer 1

Influence of gas flow on surface charge distribution in partial discharge sequences

Yan Du[1], Kai Wu[1], Yongpeng Meng[1], Nikolay Kinsht[2], Zhijun Xu[3]

[1]Xi'an Jiaotong University, China, People's Republic of; [2]Russian Academy of Sciences, Moscow; [3]Jiangsu Baojielong Magnet Wires Co,Ltd; wukai@xjtu.edu.cn

Comparison of Electrodes Arrangements of a High Voltage Pulsed Electric Field System for Liquid Sterilization using FEM Coupled with Multiobjective Optimization

Eduardo José de Araujo, Ivan José Da Silva Lopes, Jaime Arturo Ramirez

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Effect of High Electric Field on Charging Level of Power Strage Device with Spherical Electrodes

Takuma Hata, Yoji Fujita, Akihiko Kono, Masato Koyama, Hiroaki Urushibata, Ryoichi Hanaoka

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Power supply for systems operating in harsh environment by means of split-core transformer

Wojciech Piasecki, Bartlomiej Adamczyk, Marcin Szewczyk, Marek Florkowski

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Micro-processor based power supply of sinusoidal high voltage in kHz frequency range

Maria Mitronika[1], Panagiotis Svarnas[1], Epaminondas Mitronikas[2]

[1]High Voltage Laboratory, Electrical and Computer Engineering Dept, University of Patras, Greece.; [2]Electromechanical Energy Conversion Laboratory, Electrical and Computer Engineering Dept, University of Patras, Greece.; svarnas@ece.upatras.gr

Efficiency of ionocrafts: experimental investigation

Natalia Melnikova, Iuliia Safronova, Andrey Samusenko

SPbU(St.Petersburg State University), Russian Federation; melnikovanatasha18@gmail.com

OPS-PD: Oral Panel Session - PD Measurements

Time: Thursday, 31/Aug/2017: 4:00pm - 5:00pm · *Location:* Multi-Purpose Salon
Session Chair: Wojciech Koltunowicz
Session Chair: Thomas Steiner

AUTOMATED EVALUATION OF PRPD PATTERNS FOR ON-LINE PD MONITORING OF STATOR WINDING

Wojciech Koltunowicz, Alexander Belkov, Ulrike Broniecki, Laurentiu-Viorel Badicu, Bogdan Gorgan, Oliver Krause
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AN INVESTIGATION ON THE RELATION BETWEEN PRPD PATTERNS ACQUIRED BY CONVENTIONAL AND UHF NONCONVENTIONAL PD MEASURING TECHNIQUE FOR POWER TRANSFORMERS

Mohammad Akbari Azirani[1], Peter Werle[1], Asghar Akbari[2], Hamid Jahangir[2], Janusz Marian Szczechowski[3]
[1]Leibniz Universität Hannover, Schering-Institute, Germany; [2]Department of Electrical Engineering, K. N. Toosi University of Technology, Iran; [3]ABB AG, Transformer Service, Germany; azirani@ifes.uni-hannover.de

Partial Discharge Pulse Shape Analysis to Discriminate Near and Far End Failures for Cable Testing

Patrick Treyer, Petr Mraz, Urs Hammer
Haefely Hipotronics, Switzerland; mraz.petr@haefely.com

Poster Session PE7: Monitoring and Diagnostics

Time: Friday, 01/Sep/2017: 9:00am - 10:30am · *Location:* Foyer 2

Evaluation of performance of wavelet selection methods for partial discharge denoising

Luiz Augusto Medeiros Martins Nobrega, Margareth Mee Gomes de Lima, André Dantas Germano, Edson Guedes da Costa

Universidade Federal de Campina Grande, Brazil; luizaugusto.nobrega@gmail.com

Customization of the Health Evaluation Method of Self-healing Cable Sheath

Zhong Zheng, Yuanzhao Han, Meng Sun

North China Electric Power University, China, People's Republic of; zhong.zheng@ncepu.edu.cn

Utilization of hierarchical data for maintenance strategy planning of electric power equipment

Tsuguhiro Takahashi

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Remote Monitoring System Based on the Measurement and Analysis of the Surge Arrester Leakage Current

George Rossany Soares Lira[1], Cícero Rômulo Campos de Amorim Filho[1], Vandilson Rodrigo Nascimento Barbosa[1], Suelson Lopes Carvalho Batista[1], Edson Guedes da Costa[1], Marcelo José Albuquerque Maia[2]

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Analysis in time and frequency domain of the RF signal in High Voltage Insulators

Pedro Henrique Venske Rocha[1], Bruno Barbosa Albert[1], Edson Guedes Costa[1], José Elisandro Beserra Peixoto[2]

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Impact of Acidity on the Degradation of the Solid Insulation of Power Transformer

Kakou Desiré Kouassi[1], Ladji Cissé[2], Issouf Fofana[1], Yazid Hadjadj[1], D.K. Ambroise[2], K M L Yapi[1]

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Partial Discharge Localization System Based on Wireless UHF Sensors

Zhen Li[1], Lingen Luo[1], Gehao Sheng[1], Xiuchen Jiang[1], Hui Huang[2], Yun Liang[2]

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Field failed Analysis of Decay-like Fracture of Composite Insulators

Xidong Liang[1], Weining Bao[1], Yanfeng Gao[2], Jiafu Wang[3]

[1]Department of Electrical Engineering, Tsinghua University; [2]North China Electric Power Research Institute Co. Ltd; [3]National Institute of Metrology; lxd-dea@mail.tsinghua.edu.cn

Poster Session PH2: HV Industrial Applications

Time: Friday, 01/Sep/2017: 9:00am - 10:30am · *Location:* Foyer 1

METHODOLOGY FOR RELIABILITY ANALYSIS OF POWER TRANSFORMERS BASED ON FAILURES DATA

Antonio Barbosa de Oliveira Neto[1], Edson Guedes da Costa[2], Vinicius Siqueira Moraes[3], Tarso Vilela Ferreira[4]

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Investigation of Wind turbine grounding system safety

Sokratis Pastromas, Konstantinos Kalymnios, Eleftheria Pyrgioti

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Simulated study on breakdown process in lower-pressure air based on PIC-MCC method

Hiroyuki Iwabuchi, Tsutomu Oyama

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VARIABLE IMPEDANCE ENERGY-SAVING TRANSFORMER

Jiangtao Li, Minjun Zheng, Haoyan He, Hui Cao, Zheng Zhao, Yuhao Liu, Jiaxin He, Ziyuan Ren, Yi Sun, Di Xu

Xi'an Jiaotong University, China, People's Republic of; 1752941447@qq.com

Energy Scavenging Technology Based on Spatial Electromagnetic Energy for Powering Wireless Sensors

Guan Wang[1,2], ZengHao Tian[1,2], Ye Kuang[1,2], HongShun Liu[1,2], JiaJu Wang[1,2]

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