

IEEE TRANSACTIONS on DIELECTRICS and Electrical Insulation

February 2007

Volume 14

Number 1

ITDEIS

(ISSN 1070-9878)

EDITORIAL

After Five Years *R. Hackam* 1-2

PARTIAL DISCHARGES

A Novel Wavelet Transform Technique for On-line Partial Discharge Measurements Part 1 *H. Zhang, T. R. Blackburn, B. T. Phung and D. Sen* 3-14

A Novel Wavelet Transform Technique for On-line Partial Discharge Measurements Part 2 *H. Zhang, T. R. Blackburn, B. T. Phung and D. Sen* 15-22

Inferring Ceramic Insulator Pollution by an Innovative Approach Resorting to PD Detection *A. Cavallini, S. Chandrasekar, G. C. Montanari and F. Puletti* 23-29

Study on Mathematical Model for VHF Partial Discharge of Typical Insulated Defects in GIS *J. Tang, Q. Zhou, M. Tang and Y. Xie* 30-38

Partial Discharge Inception and Propagation Characteristics of Magnet Wire for Inverter-fed Motor under Surge Voltage Application *N. Hayakawa, M. Morikawa and H. Okubo* 39-45

SPACE AND SURFACE CHARGES

Phenomena and Mechanism of Electric Charges on Spacers in Gas Insulated Switchgears *S. Okabe* 46-52

Influence of Thermal Treatment and Residues on Space Charge Accumulation in XLPE for DC Power Cable Application *M. Fu, G. Chen, L. A. Dissado and J. C. Fothergill* 53-64

Temperature Effect on Space Charge Dynamics in XLPE Insulation *Y. L. Chong, G. Chen and Y. F. F. Ho* 65-76

Phase-Resolved Pulsed Electro-Acoustic Technique to Detect Space Charge in Solid Dielectrics Subjected to AC Voltage *S. Banji, M. Abou Dakka and A. Bulinski* 77-82

GASEOUS/SOLID DIELECTRICS

Fundamental Insulation Characteristic of High-Pressure CO₂ Gas under Actual Equipment Conditions *S. Okabe, H. Goshima, A. Tanimura, S. Tsuru, Y. Yaegashi, E. Fujie and H. Okubo* 83-90

AC Particle-Triggered Corona Discharge in Low Pressure SF₆ Gas *Y. Negara, K. Yaji, K. Imasaka, N. Hayashi, J. Suehiro and M. Hara* 91-100

Insulation Properties and Degradation Mechanism of Insulating Spacers in Gas Insulated Switchgear (GIS) for Repeated/Long Voltage Application *S. Okabe* 101-110

Progression of Positive Corona on Cylindrical Insulating Surfaces Part I: Influence of Dielectric Material *B. H. Tan, N. L. Allen and H. Rodrigo* 111-118

Numerical Modeling of Near Corona Wire Electrohydrodynamic Flow in a Wire-plate Electrostatic Precipitator *Y. N. Chan, J.-S. Chang, A. A. Berezin and J. Mizeraczyk* 119-124

OUTDOOR INSULATION

A Comparison of the Pollution Performance of Long Rod and Disc Type HVDC Insulators *J. M. Seifert, W. Petrusch and H. Janssen* 125-129

Aging of Silicone Rubber Composite Insulators on 400 kV Transmission Lines *S. M. Rowland, Y. Xiong, J. Robertson and S. Hoffinan* 130-136

Properties of Interfaces in Silicone Rubber *J. Andersson, S. M. Gubanski and H. Hillborg* 137-145

DIELECTRIC LIQUIDS

Evaluation of Breakdown Characteristics of Oil-immersed Transformers under Non-standard Lightning Impulse Waveforms *S. Okabe* 146-155

Dielectric Response of Mineral Oil Impregnated Cellulose and the Impact of Aging *D. Linhjell, L. Lundgaard and U. Gäfvert* 156-169

VACUUM INSULATION

Correlation between Trapping Parameters and Surface Insulation Strength of Solid Dielectric under Pulse Voltage in Vacuum *W.-B. Zhao, G.-J. Zhang, Y. Yang and Z. Yan* 170-178

On-line Monitoring of Pressure in Vacuum Interrupters *H. Mao, G. Chang, X. Zhu and Y. Wang* 179-184

SOLID DIELECTRICS

Effects of Temperature and Impurities on the DC Conductivity of Snow *M. Farzaneh, I. Fofana and H. Hemmatjou* 185-193

Evaluation of Medium Voltage Enameled Wire Exposed to Fast Repetitive Voltage Pulses *S. Uj Haq, S. H. Jayaram and E. A. Cherney* 194-203

Effect of Nb Doping on Structural and Electric Properties of PZT (65/35) Ceramic *Md. A. Moháddon, R. Kumar, P. Goel and K. L. Yadav* 204-211

Low-Frequency Dielectric Response of Epoxy-Mica Insulated Generator Bars during Multi-Stress Aging *E. David and L. Lamarre* 212-226

CABLES
Aging and Condition Monitoring Studies of Composite Insulation Cables Used in Nuclear Power Plants *K. Anandakumaran* 227-237

FERROELECTRETS

Charging Properties and Time-temperature Stability of Innovative Polymeric Cellular Ferroelectrets *G. C. Montanari, D. Fabiani, F. Ciani, A. Motori, M. Paajanen, R. Gerhard-Multhaupt and M. Wegener* 238-248

ELECTRICAL TREES

Resolution Evaluation of Ultrasonic Diagnosis Tools for Electrical Insulation Devices and the Detection of Electrical Trees *H. Ueno, P. Walter, C. Cornelissen and A. Schmetter* 249-256

DISCUSSION

Discussion *S. Nadarajah, S. Kotz and H. Hirose* 257-260

CALL for PAPERS

Call for Papers: Nanodielectrics *J. K. Nelson and L. S. Schadler* 261

