

PRZEGLĄD ELEKTROTECHNICZNY KONFERENCJE, Vol. 2007, No 3

Contents

01		1
02	Spis treści	3
03	Contents	5
04	Romuald WŁODEK - Problems of the high voltage insulating systems exploitation - introduction	7
05	Jerzy BAJOREK - Selected problems of corona modeling for HV transmission line conductors	9
06	Jozef BALOGH, Juraj KURIMSKÝ - Partial discharge activity sensing by inductive sensor and simultaneous acoustic emission sensing	13
07	Szymon BANASZAK - Research on ageing level of composite insulators	17
08	Miroslav BÁNES, Peter SEMANČÍK - Degradation of the PE insulation due to electrical treeing	21
09	Jerzy BIELECKI, Janusz FLESZYŃSKI, Jacek WANKOWICZ - Construction integrity of composite insulators subjected to cyclic loads – preliminary tests	24
10	Tomasz BOCZAR, Sebastian BORUCKI, Andrzej CICHÓN, Marcin LORENC - The assessment of the technical condition of the transformer core based on vibroacoustic investigations	27
11	Tomasz BOCZAR, Andrzej CICHÓN, Sebastian BORUCKI, Marcin LORENC - Correlative analysis of the acoustic emission signals generated by electrical discharges in oil	31
12	Witold BRETUJ, Janusz FLESZYŃSKI, Krzysztof WIECZOREK - Aging tests of composite model insulators in a clean fog chamber	35
13	Ryszard CHYBOWSKI, Marek KONECKI, Norbert TUŚNIO - Modelling of the fire development in the cable tunnel	39
14	Roman CIMBALA - Dielectric spectroscopy of oil	42
15	Roman CIMBALA - Diagnostic of transformer oil with gas chromatography using artificial intelligence	45
16	Joanna CZUPRYŃSKA - Images of lightning cloud caused electrostatic field surrounding chosen building	48
17	Michał DASZCZYŚZAK - Mechanical exposures of insulators during short-circuit current	51
18	Bystrík DOLNÍK - Influence of pollution of surge arrester housing on the leakage current	54
19	Bystrík DOLNÍK - Diagnostics of overvoltage protection devices used in low voltage system	58
20	Bystrík DOLNÍK, Juraj KURIMSKÝ, Roman MOLNÁR - Switching overvoltages in low voltage system	61
21	Bogumił DUDEK, Rafał CZAPAJ - Development in robotics and artificial intelligence for live line maintenance	66
22	Bogumił DUDEK, Krzysztof FRYMER - Replacement of apparatuses on HV substations with live line methods	70
23	Bogumił DUDEK, Krzysztof FRYMER - Replacement of an existing ground wire by OPGW on energized transmission line	74
24	Jaroslav DŽMURA - Macroscopic particles in direct and alternating electric field	78
25	Barbara FLORKOWSKA, Jakub FURGAŁ, Łukasz JASIŃSKI, Paweł ZYDRÓN – Investigations of transformers insulation systems using of the step voltage method	81
26	Barbara FLORKOWSKA, Marek FLORKOWSKI, Józef ROEHRICH, Paweł ZYDRÓN - Analysis of phase-resolved images of partial discharges generated in compressed air at non-uniform electric field	84
27	Barbara FLORKOWSKA, Paweł ZYDRÓN - Selected methods of investigations of electrical insulating materials and HV systems	88
28	Marek FLORKOWSKI, Jakub FURGAŁ - Assessment of winding failures on base of frequency responses	92
29	Jakub FURGAŁ – Analysis of transformer inrush currents	96
30	Jakub FURGAŁ, Marcin IBRAGIMOW - Investigations of overvoltages generated during switching of medium voltage transformers	100
31	Zbigniew GACEK, Dominik DUDA, Krzysztof ROJEK - Analysis of failure streams for long-rod insulators in chosen 110 kV overhead power lines	104
32	Stanisław GRZYBOWSKI - Fiberglass distribution line pole	108
33	Adam JAROS, Adam KETNER, Krzysztof KRUPSKI - Protection level and insulation level for transformer	112
34	Maciej JAROSZEWSKI, Paweł KOSTYŁA, Zbigniew WACŁAWEK - Method of varistor model internal parameters determination using measured values of current and voltage	115
35	Maciej JAROSZEWSKI, Janina POSPIESZNA - The influence of current impulses on degradation phenomena in varistor ceramic	117
36	Waldemar JASKÓŁOWSKI, Ryszard CHYBOWSKI, Mariusz KWIATKOWSKI - Comparative analysis of flame propagation on modern electric cables	119
37	Waldemar JASKÓŁOWSKI, Ryszard CHYBOWSKI, Marzena PÓŁKA - Investigation of thermal stability of sheathing materials used for electric cables production	122
38	Iraida KOLCUNOVÁ - Measurements of natural oils electrical properties	125
39	Wojciech KOŁTUNOWICZ, Ronald PLATH - After-installation testing of HV polymeric cable lines	128
40	John KUFFEL, Edmund KUFFEL, ZIQIN LI, B. FRIEMARK, Teja RAO - Visual corona testing of 765-kV line insulator assemblies	132
41	Stanisław KULAS, Łukasz KOLIMAS - The simulative research of high current contacts in making switch	137
42	Juraj KURIMSKÝ - The longterm view-point at the partial discharges activity in the insulation of the pump motors	141
43	Stig KYRKJEEIDE, Mirosław KUCHTA - In-service testing and on-line monitoring of metal oxide surge arresters	144
44	Grzegorz MALITOWSKI - An attempt on partial discharge recognition in selected simple insulating systems	150
45	Grzegorz MASŁOWSKI, Robert ZIEMBA - Modeling of overvoltages induced in power lines allowing for lightning channel	153
46	Dušan MEDVEĎ - Application of wavelet transformation in high voltage processes	157
47	Szczepan MOSKWA, Romuald WŁODEK - Application of queue system model to optimization of diagnostic maintenance costs	162
48	Wiesław NOWAK, Rafał TARKO - Computer simulation of overvoltage risks for dimensioning of clearances of high and extra high power lines	165
49	Marek OLESZ - The voltage influence on level of charges in the defect at the polyethylene insulation	169
50	Piotr PAPLIŃSKI, Hubert ŚMIETANKA, Jacek WAŃKOWICZ - Diagnostics of surge arresters – field test experience	173
51	Jaroslav PETRÁŠ - Partial discharge acoustic emission signal analysis	177

52	Krzysztof PĘDZISZ - Failure of medium-voltage power lines	180
53	Krzysztof PĘDZISZ, Józef ROEHRICH - EPR medium-voltage cables	184
54	Tomasz PIOTROWSKI - Efficiency improvement of power transformer fault detection by DGA methods utilizing fuzzy logic	188
55	Marzena PÓŁKA, Waldemar JASKÓŁOWSKI - Toxic hazard generated during exploitation of electric power cables in fire condition	192
56	Lukáš PROKOP, Zdeněk HRADÍLEK - Analysis of power supply outages aftereffects	195
57	Aleksandra RAKOWSKA - Development of high temperature superconducting power cables	198
58	Przemysław RANACHOWSKI, Feliks REJMUND - Microscopic methods used in investigation of properties of ceramic electrotechnical materials	202
59	Sławomir SAMEK, Jan STRZAŁKA - New technical solutions and proposals of exploitation for high voltage electrical power objects	206
60	Howard SEDDING, Mark FENGER, John KUFFEL, Edmund KUFFEL - Recent experiences with after-laying tests of solid dielectric transmission class cables	212
61	Robert SEKUŁA, Sławomir LESZCZYŃSKI - Selected aspects of scrap electric power products utilization	216
62	Tadeusz SIKORA, Radomir GOŃO - MV cables failure rate function analysis	220
63	Jerzy SŁOWIKOWSKI, Helena SŁOWIKOWSKA - Evolution of recommendations in IEC standards for transformer mineral oils	223
64	Marek SZADKOWSKI - Aerial spaces valuation in HV and EHV switching stations in conditions of short-circuit	228
65	Janusz SZCZECHOWSKI, Hosein BORSI, Ernst GOCKENBACH - Repeatability of frequency response analysis measurements of transformers	232
66	Marek SZCZERBIŃSKI - Lightning equivalent area of cuboidal structures assessed with electro-geometrical model	236
67	Radosław SZEWCZYK, Richard P. MAREK - Comments to Technical Specification IEC/TS 60076-14 "Design and application of liquid-immersed power transformers using high-temperature insulation materials"	240
68	Krzysztof SZYDŁOWSKI, Ireneusz SZCZYGIEL - Experiences from electrical power apparatus assessment using thermographic method	244
69	Rafał TARKO, Wiesław NOWAK - Implementation of corona model in EMTP-ATP software for analysis of propagation surges in electrical power systems	247
70	Ján TKÁČ, Bystrík DOLNÍK, Juraj KURIMSKÝ - Contribution to measurement of discharge activity in acoustic range	251
71	Arkadiusz WAKIEĆ, Jacek RÓZGA, Marek OLESZ - Using of electric power quality measurements for analysis of short circuits in power system	254
72	Eugeniusz WASILENKO - Where the life-curve of a polymeric insulation drives up to?	258
73	Zofia WRÓBEL - Analysis of working of selected overvoltage protection devices for track circuits in lightning impulse conditions	260
74	Tomasz ZDZIARSKI - Using of the Matlab-PLECS library for simulation of overvoltages caused by direct lightning strike at high voltage line	264
75	Marek ZENKER - Modelling of relaxation phenomena in oil gaps of power transformers	268
76	Index	272