

放 電 開閉保護 合同研究会 高 電 圧

放電技術委員会

- 〔委員長〕 中野俊樹 (防衛大学校)
 〔副委員長〕 匹田政幸 (九州工業大学)
 〔幹事〕 枡久保文嘉 (首都大学東京)、熊田亜紀子 (東京大学)
 〔幹事補佐〕 安井祐之 (東 芝)

開閉保護技術委員会

- 〔委員長〕 金子英治 (琉球大学)
 〔幹事〕 佐藤 隆 (日立製作所)、森 正 (東 芝)
 〔幹事補佐〕 恩地俊行 (富士電機アドバンステクノロジー)、楫野宏樹 (三菱電機)

高電圧技術委員会

- 〔委員長〕 横山 茂 (電力中央研究所)
 〔幹事〕 青野一朗 (三菱電機)、保科好一 (東 芝)
 〔幹事補佐〕 水谷嘉伸 (電力中央研究所)

日 時 2007年2月1日 (木) 9:30~17:30
 2日 (金) 9:00~16:00

場 所 静岡大学 浜松キャンパス (静岡県浜松市城北 3-5-1)

共 催 電気学会東海支部

協 賛 Japan Chapter of the IEEE Society on Power Engineering,
 Japan Chapter of the IEEE Society on Dielectrics and Electrical Insulation

議 題 テーマ「雷および高電圧、開閉保護、放電技術一般」

February 1st (Thu.) AM (9:30~12:30)

Session 1 (Room A)

ED-07-25 Lightning electric field waveforms associated with transmission line faults in
 SP-07-01 winter
 HV-07-25 Mikihisa Saito, Masaru Ishii (The University of Tokyo)
 Akiko Sugita (Franklin Japan Co.)
 Naoki Itamoto (Hokuriku Electric Power Co.)

ED-07-26 The Observations of the Amount of Lightning Electric Charge in Chugoku Area
 SP-07-02 Shinji Kawamoto, Kohji Maeta (Chugoku Electric Power Co., Inc.)
 HV-07-26 Kohji Michishita (Shizuoka University)

- ED-07-27 An Investigation of Lightning Strikes in Portugal
 SP-07-03 Rafael Rodrigues (Institute of Engineering of Lisbon)
 HV-07-27 Maria T. Correia do Barros (Electricity of Portugal)
 Akihiro Ametani (Doshisha University)
- ED-07-28 Cloud-to-Ground Lightning Flashes around Japan Observed by JLDN
 SP-07-04 Masaru Ishii, Fumiyuki Fujii (University of Tokyo)
 HV-07-28 Akiko Sugita (Franklin Japan Co.)
- ED-07-29 E-field Waveform Parameters Associated with Negative Return Strokes in Southern
 SP-07-05 Kyushu
 HV-07-29 Koji Michishita, Nozomu Nagatsuna, Tomomasa Murakami (Shizuoka University)
 Takashi Harada (Kyusyu Electric Power Co. Inc.)
- ED-07-30 A Study of Estimation of Lightning Striking Points through Measurements of Vertical
 SP-07-06 E-Field
 HV-07-30 Koji Michishita, Takayuki Nishihira (Shizuoka University)
 Yasuji Hongo (Tohoku Electric Power Co. Inc.)
 Shigeru Yokoyama (CRIEPI)
- ED-07-31 Study of Lightning Electric Charge Amount Estimates Using Electric Field
 SP-07-07 Measurements
 HV-07-31 Fukumune Suzuki (Sankosha Co.)
 Masahito Shimizu (Chubu Electric Power Co. Inc.)
 Shigeru Yokoyama (CRIEPI)

February 1st (Thu.) AM (9 : 30~12 : 30)

Session 2 (Room B)

- ED-07-32 V-t characteristics and reliability evaluation method of oil-filled transformer
 SP-07-08 for non-effectively grounded voltage class
 HV-07-32 Jun Takami, Shigemitsu Okabe, Toshihiro Tsuboi (TEPCO R&D Center)
- ED-07-33 Propagation Characteristics of Higher-order Mode Electromagnetic Wave in GIS Model
 SP-07-09 Shuhei Kaneko, Shigemitsu Okabe (Tokyo Electric Power Company)
 HV-07-33
- ED-07-34 Sound Wave Propagation Analysis Using FDTD for Contaminated Insulator Discharge
 SP-07-10 Noise
 HV-07-34 Takaie Matsumoto, Takeshi Shimoda (Shizuoka University)
- ED-07-35 The Observation of Audible Discharge Noise caused by Contaminated Insulators on
 SP-07-11 the 500 kV Transmission Tower
 HV-07-35 Takaie Matsumoto, Yuto Kobayashi (Shizuoka University)
- ED-07-36 Improvement of Insulation Performance of A Porcelain Long-Rod Insulator under
 SP-07-12 Contaminated Conditions
 HV-07-36 Kazuma Yamada, Takeshi Yamazaki, Shouta Matsushita, Takuma Hashimoto,
 Shuhei Matsushita, Chiharu Saka, Basanta Kumar Gautam, Kenji Sakanishi and
 Ryouzuke Matsuoka (Chubu University)

ED-07-37 Application of Micro Discharge for Air Purification
 SP-07-13 Kazuo Shimizu, Takeshi Sugiyama, Manisha Nishamani L.S., Masaki Kanamori
 HV-07-37 (Innovative Joint Research Center, Shizuoka University)

February 1st (Thu.) PM (13 : 20~14 : 20)
Invited Lecture (Room A)

February 1st (Thu.) PM (13 : 20~14 : 20)
Invited Lecture (Room B)

February 1st (Thu.) PM (14 : 30~17 : 30)
Session 3 (Room A)

ED-07-38 A Technique for Calculating the Skin and Proximity Effects of Arbitrary
 SP-07-14 Cross-Section Conductors
 HV-07-38 Toru Miki, Taku Noda (CRIEPI)

ED-07-39 FDTD Analysis of Voltages Induced on an Overhead Wire Due to Surges Propagating
 SP-07-15 Along a Grounding Mesh Conductor
 HV-07-39 Hiroyuki Yamamoto, Yoshihiro Baba, Naoto Nagaoka, Akihiro Ametani
 (Doshisha University)

ED-07-40 Modeling of Thin Wires in Air for FDTD Simulations Implemented in Non-square Grids
 SP-07-16 Yohei Tanuguchi, Yoshihiro Baba, Naoto Nagaoka, Akihiro Ametani
 HV-07-40 (Doshisha University)

ED-07-41 Effects of Tall Building on Lightning Electromagnetic Fields
 SP-07-17 Yoshihiro Baba (Doshisha University)
 HV-07-41 Vladimir A. Rakov (University of Florida)

ED-07-42 Electromagnetic Transients on an Underground Cable due to a Lightning Current
 SP-07-18 Flowing into the Metallic Sheath
 HV-07-42 Akihiro Ametani, Naoto Nagaoka, Daishuke Miyazaki (Doshisha University)
 Norikazu Taki (Ricoh Company)

ED-07-43 Numerical Simulation on Lightning Surge Response of Seismic Isolated Building by
 SP-07-19 FDTD and EMTP
 HV-07-43 Naoto Nagaoka (Doshisha Univ.)
 Hiroshi Morita (Kinden Co.)
 Yoshihiro Baba, Akihiro Ametani (Doshisha Univ.)

ED-07-44 A Study on Lightning Surge Characteristics of a Transmission Tower Considering
 SP-07-20 Overhead Wire Structure by the FDTD Method
 HV-07-44 Naoki Itamoto, Hironao Kawamura (Hokuriku Electric Power Company)
 Akiyoshi Tatematsu, Taku Noda, Hideki Motoyama (CRIEPI)
 Masaru Ishii (The University of Tokyo)

February 1st (Thu.) PM (14 : 30~17 : 30)**Session 4 (Room B)**

- ED-07-45 Outdoors testing of various lightning rods
 SP-07-21 Gerard Berger (LPGP, CNRS),
 HV-07-45 Gerard Serrie (Soulé Protection Surtensions)
- ED-07-46 Risk Evaluation of Lightning Damage to Wind Turbines with the Electro Geometrical
 SP-07-22 Model
 HV-07-46 Tadashi Sakata (Kinden Corporation)
 Kazuo Yamamoto (Kobe City College of Technology)
 Shozo Sekioka (Shonan Institute of Technology)
 Shigeru Yokoyama (CRIEPI)
- ED-07-47 Lightning Striking Aspect for Wind Turbine in Winter Season
 SP-07-23 -Development of Low Frequency Rogoskey Coil and Observation Results at Nikaho Wind
 HV-07-47 Park in Japan
 Akira Asakawa, Jun Wada, Shigeru Yokoyama, Takatoshi Shindo (CRIEPI)
 Hiroaki Hyodo, Kazuo Hachiya (J-Power)
- ED-07-48 Observation of current characteristics of winter lightning at 200m chimney in Fukui
 SP-07-24 thermal power plant during from 2003 to 2005
 HV-07-48 Megumu Miki, Atsushi Wada, Akira Asakawa (CRIEPI)
- ED-07-49 Research of damage with lightning for wind turbines
 SP-07-25 Masayuki Minowa (Toenec Corporation)
 HV-07-49 Masayasu Minami (C-Tech Corporation)
 Masayuki Yoda (Aichi Institute of Technology)
- ED-07-50 Investigation on the efficiency of MHI lightning protection systems for wind
 SP-07-26 turbine blades
 HV-07-50 Takehiro Naka, Shinji Arinaga (Mitsubishi Heavy Industries, LTD.)
- ED-07-51 Development of Lightning Damaged Indicator for Overhead Ground Wire
 SP-07-27 Masahito Shimizu (Chubu Electric Power Co. Inc.)
 HV-07-51 Masayoshi Arakane (Nichihoku Co. Ltd)
 Hiroaki Saito, Hiroshi Yonei (Nichiyu Giken Kogyo Co. Ltd)
- ED-07-52 Detection of characteristic LEMP waveforms by Tohoku IMPACT sensor network in
 SP-07-28 winter
 HV-07-52 Noriyasu Honma (Tohoku Electric Power Co. Inc.)

February 2nd (Fri.) AM (9 : 00~12 : 00)**Session 5 (Room A)**

- ED-07-53 Estimation of Occurrence Probability of Lightning Damages on Railway Level
 SP-07-29 Crossing
 HV-07-53 Hideki Arai, Kazutoshi Sato (Railway Technical Research Institute)

- ED-07-54 Changes of lightning damage aspect of electrical household appliances
 SP-07-30 Takeshi Hosokawa (Former EMAJ)
 HV-07-54 Shigeru Yokoyama, Tsutomu Yokota (CRIEPI)
 Yudai Tsutsumiuchi (Kyushu university)
 Masahiro Soeda, Kouichi Sacoda (Kyusyu Electric Power Co)
- ED-07-55 Experimental examination of freezing phenomena of electronic devices due to
 SP-07-31 lightning surge
 HV-07-55 Yudai Tsutsumiuchi (Kyushu university)
 Takeshi Hosokawa (Former EMAJ)
 Masahiro Soeda (Kyusyu Electric Power CO)
 Ikuta Masateru, Shigeru Yokoyama (CRIEPI)
- ED-07-56 Induced Surge Characteristics on a Control Cable in a Gas-insulated Substation
 SP-07-32 due to Switching Operation
 HV-07-46 Takashi Goto, Naoto Nagaoka, Akihiro Ametani (Doshisha University)
- ED-07-57 Phenomena of Low Voltage Distribution System in Common Residences due to Turning
 SP-07-33 on and off the Circuit Breaker
 HV-07-57 Satoshi Mashimo (Kanto Electrical Safety Inspection Association)
 Takumi Ogawa, Haruki Nozawa (Tokyo Electric Power Company)
 Fumio Ushigome, Akira Hayashi, Keisuke Oka
 (Kanto Electrical Safety Inspection Association)
- ED-07-58 An Example of Investigation in Lightning Damage on micro-radio steel tower and
 SP-07-34 Proposal of Countermeasures
 HV-07-58 Tomoya Sato, Shun-ichi Yanagawa, Hiroshi Kurita (Shoden Co.)
- ED-07-59 Energy Coordination between Surge Protective Devices Using Rectification Type
 SP-07-35 Decoupling Element
 HV-07-59 Hirotaka Shimizu, Nobuhiro Watanabe (Polytechnic University)

February 2nd (Fri.) AM (9 : 00~12 : 00)

Session 6 (Room B)

- ED-07-60 Broken Mechanism of Straight Copper Conductors due to Lightning High Impulse
 SP-07-36 Current
 HV-07-60 Xiaobo Hu (Chuo University)
 Takahiro Otsuka, Toru Iwao (Tokyo Electric Corporation)
 Tsuginori Inaba (Chuo University)
- ED-07-61 Moving range and current density of breaking arc in DC 42 Volt resistive circuit
 SP-07-37 Junya Sekikawa, Takayoshi Kubono (Shizuoka University)
 HV-07-61
- ED-07-62 Time-resolved Spectroscopic Temperature Measurement of Breaking Arcs in D. C. 42V
 SP-07-38 circuit
 HV-07-62 Naoki Moriyama, Junya Sekikawa, Takayoshi Kubono (Shizuoka University)

- ED-07-63 The moving characteristic of the breaking arc spots depending on the separating
 SP-07-39 speed of Ag electrical contacts
 HV-07-63 Yoshinobu Nakamura, Junya Sekikawa, Takayoshi Kubono (Shizuoka University)
- ED-07-64 Breaking Characteristics of the High Voltage Etching Fuse
 SP-07-40 Mitsuo Asayama, Yuhzoh Ishikawa, Kengo Hirose, Shinichi Kobayashi, Yashushi Yamano
 HV-07-64 (Saitama University)
- ED-07-65 Numerical Calculation of Current Density in a Vacuum Arc and Measurement of Related
 SP-07-41 Phenomena
 HV-07-65 Masakazu Nagashima, Kohei Arakaki, Kiyomaro Touyama, Eiji Kaneko (University of
 the Ryukyus)
 Naotaka Ide, Satoru Yanabu (Tokyo Denki University)
- ED-07-66 Preliminary measurements of neutral gasses and charged particles diffusing from
 SP-07-42 vacuum arc
 HV-07-66 Yu Kokubo, Daigo Kosugi, Yasushi Yamano, Shinichi Kobayashi
 (Saitama University)

February 2nd (Fri.) PM (13 : 00~16 : 00)

Session 7 (Room A)

- ED-07-67 An Investigation on Overhead Distribution-Line Modeling for Lightning Overvoltage
 SP-07-43 Simulations
 HV-07-67 Susumu Matsuura, Taku Noda, Akira Asakawa, Shigeru Yokoyama (CRIEPI)
- ED-07-68 Sparkover Rates of Medium-Voltage Line Due to Indirect and Direct Lightning Hits
 SP-07-44 Dependent on Correlation between Peak Value and Front Duration of Return-Stroke
 HV-07-68 Current Waveform
 Yasuji Hongo (Tohoku Electric Power Co. Inc.)
 Koji Michishita (Shizuoka University)
- ED-07-69 Observation results of Lightning Performance in Distribution Lines
 SP-07-45 Teru Miyazaki, Shigemitsu Okabe, Kiyoshi Aiba, Takao Hirai
 HV-07-69 (Tokyo Electric Power Company)
- ED-07-70 Response of Pole-Type Distribution Transformers Dependent on Rated Power
 SP-07-46 Koji Michishita, Hideo Hiraiwa (Shizuoka University)
 HV-07-70 Yasuji Hongo (Tohoku Electric Power Co. Inc.)
- ED-07-71 Research on identification of single-phase earth faults in electrical distribution
 SP-07-47 networks
 HV-07-71 LI Xuewen, SUN Keping (Shanghai Maritime Univ.)
- ED-07-72 Approximate Formula of Peak Lightning-Induced Voltages on a Long Overhead
 SP-07-48 Distribution Line
 HV-07-72 Shozo Sekioka (Shonan Institute of Technology)

ED-07-73 Lightning Protection Design for Distribution Line Facilities
 SP-07-49 Yoji Sasano, Minoru Tsukazaki (Otowa Electric Co., LTD)
 HV-07-73

February 2nd (Fri.) PM (13 : 00~16 : 00)

Session 8 (Room B)

ED-07-74 Plasma arc mode applied by external magnetic field
 SP-07-50 Kazuhiro Oinuma, Toru Iwao, Motoshige Yumoto
 HV-07-74 (Musashi Institute of Technology)

ED-07-75 VFTO Transmitted into Secondary System through High Turn-Ratio Transformer
 SP-07-51 Chang-Shing Lee, Shi-Lin Chen (National Tsing Hua University)
 HV-07-75

ED-07-76 Transferred Pip formed on Ag contacts mounted on relays in a DC42V resistive circuit
 SP-07-52 Junpei Watanabe, Junya Sekikawa, Takayoshi Kubono (Shizuoka University)
 HV-07-76

ED-07-77 Non-equilibrium modeling of Ar-N₂-H₂ induction plasma at reduced pressure
 SP-07-53 Yasunori Tanaka (Kanazawa Univ.)
 HV-07-77

ED-07-78 Particle composition of CO₂-CF₃I mixture at temperatures of 300-30,000 K
 SP-07-54 Yasunobu Yokomizu, Ryusuke ochiai, Toshiro. Matsumura (Nagoya University)
 HV-07-78

ED-07-79 Evaluation of thermal interrupting performance of SF₆ gas circuit breaker with
 SP-07-55 classical arc models
 HV-07-79 Sadayuki Kinoshita, Kenji Kamei, Hiroki Ito (Mitsubishi Electric Corp.)

ED-07-80 Development of large current making switch
 SP-07-56 Hiromichi Kawano, Kietsu Kudo, Kensaku Miyazaki, Nobuyuki Miyake, Hisatoshi Ikeda
 HV-07-80 (TOSHIBA Corporation)

◎ 講演時間 1件当り 25分 (質疑応答5分を含む)