

Schedule

		09:00 - 12:00	12:00 - 13:20	13:20 - 15:20	15:20 - 15:40	15:40 - 17:40	18:00 - 20:00
6 Sep (Mon)	Grand Lecture Room						
	Room A			Tutorial in English GIS Course (13:00-15:30)	Break	Tutorial in English Transformer Course (15:50-18:20)	
	Room B			Tutorial in English Rotating Machine Course (13:00-15:30)		Tutorial in English Cable Course (15:50-18:20)	
	Room C			Tutorial in Japanese Cable Course (13:00-14:10) Transformer Course (14:20-15:30)		Tutorial in Japanese GIS Course (15:50-17:00) Rotating Machine Course (17:10-18:20)	
	Lobby (3 rd &4 th Floors)						
	Techno Plaza						
	Registration			Registration(12:00 -)		Registration	
	Others						Welcome party (18:30~)
7 Sep (Tue)	Grand Lecture Room	Opening / Plenary session	Lunch & Break		Break		
	Room A			Oral A-1 (Transformer-1)		Oral A-2 (Transformer-1)	
	Room B			Oral B-1 (Cable-1)		Oral B-2 (Cable-2)	
	Room C			Oral C-1 (Switchgears-1)		Oral C-2 (Switchgears-2)	
	Lobby (3 rd &4 th Floors)	Preparation for P1		Preparation for P1	Preparation for P1	Poster P1	
	Techno Plaza	Exhibition		Exhibition	Exhibition		
	Registration	Registration		Registration	Registration		
	Others						
8 Sep (Wed)	Grand Lecture Room		Lunch & Break		Break		
	Room A	Oral A-3 (Transformer-2)		Oral A-4 (Transformer-2)		Oral A-5 (Transformer-3)	
	Room B	Oral B-3 (Cable-3)		Oral B-4 (Rotating machines-1)		Oral B-5 (Rotating machines-2)	
	Room C	Oral C-3 (Insulating materials)		Oral C-4 (Outdoor insulation)		Oral C-5 (Switchgears-3)	
	Lobby (3 rd &4 th Floors)	Preparation for P2		Preparation for P2	Preparation for P2	Poster P2	
	Techno Plaza	Exhibition		Exhibition	Exhibition		
	Registration	Registration		Registration	Registration		
	Others	Short Tour (1 st Group)		Short Tour (2 nd Group)			
9 Sep (Thu)	Grand Lecture Room		Lunch & Break (Extended Adcom)				
	Room A	Oral A-6 (Transformer-4)					
	Room B	Oral B-6 (Cable-4)					
	Room C	Oral C-6 (PD diagnostic methods)					
	Lobby (3 rd &4 th Floors)						
	Techno Plaza	Exhibition					
	Registration	Registration		Registration	Registration	Registration (at Banquet)	
	Others			Technical tour		Banquet	
10 Sep (Fri)	Grand Lecture Room		Lunch & Break		Break	Closing	
	Room A	Oral A-7 (Transformer-5)		Oral A-8 (Transformer-5)			
	Room B	Oral B-7 (Optical sensor)		Oral B-8 (Optical sensor)			
	Room C	Oral C-7 (New developments in asset management)		Oral C-8 (Overhead transmission lines)			
	Lobby (3 rd &4 th Floors)						
	Techno Plaza						
	Registration	Registration		Registration			
	Others						
11 Sep (Sat)	Others	Excursion					

Opening ceremony & Plenary lectures & Memorial lecture

Tuesday September 7, 9:00-12:00

Venue: Grand Lecture Room

Plenary lectures

- P-1 Condition Monitoring and Diagnosis for Reliable Power Transmission and Distribution
Ernst Gockenbach (Leibniz Universität Hannover)
- P-2 Enabling Asset Management with the Smart Grid
Mark McGranaghan, Paul Myrda, Ashok Sundaram (Electric Power Research Institute)
- P-3 Condition Monitoring and Diagnosis for Aged Power Apparatus in Japan
Hiroshi Yamaguchi (The Tokyo Electric Power Co., Inc.)

Memorial lecture honoring Prof. Kyu-Bock Cho

- P-4 Recent Activities Related to CMD in Korea and the Contribution of the late Prof. Kyu-Bock Cho
*Dae-Hee Park (Wonkwang University), Hyun-Hoo Kim (Doowon Technical University College),
Kee-Joe Lim (Chungbuk National University)*

Group photo

Oral Session A1: Transformer-1 General

Chair: Ernst Gockenbach (Leibniz Universität Hannover)

Tuesday September 7, 13:20-15:20

Venue: Room A (301)

- A1-1 Off-line and On-line Dielectric Response Measurements for Diagnostics of Paper-oil Insulation
Stanislaw Michal Gubanski, Tord Bengtsson, Jörgen Blennow, Björn Sonnerud, Nilanga Abeywickrama (Chalmers University of Technology)
- A1-2 Study on the Propagation of PD Signals in Transformer Winding
*Santosh Kumar Annadurai, Jashavant Jayrambhai Patel, Murlidhar Nikam (Crompton Greaves Ltd.),
Udayakumar Kodhandaraman (Anna University)*
- A1-3 A New Method of Winding Clamping Force Measurement for Power Transformers
Oleg Kouzmine, Peter Werle (ABB, Power Transformers)
- A1-4 Application of Vibration Frequency Response Analysis Method to Detect the Winding Deformation of Power Transformer
Fenghua Wang, Yue Li, Zhijian Jin (Shanghai Jiaotong University)
- A1-5 Diagnosis for Aging Degradation of Insulating Paper in Power Transformers by Measuring the Refractive Index of Cellulose Fibers
Masanobu Yoshida (Chubu Electric Power Co., Inc.), Yoshinori Konishi, Masami Nagatomo (Yuka Industries Co., Ltd.)
- A1-6 Basic Concept and Realization of Smart Power Transformer
Guan-Jun Zhang, Feng-Jiao Wu, Ming Dong, Zhang Yan (Xi'an Jiaotong University)

Oral Session A2: Transformer-1 General

Chair: Maks Babuder (Elektroinstitut Milan Vidmar)

Tuesday September 7, 15:40-17:40

Venue: Room A (301)

- A2-1 Current Situation of Condition Monitoring and Smart Grid in China
(invited) *Ming Dong (Xi'an Jiaotong University, Postdoctoral Workstation of Northwest Power Grid Co., Ltd.), Dai-yong Yang, Hai-bin Zhou, Z. Yan (Xi'an Jiaotong University)*
- A2-2 Thermal Aging and High-temperature Characteristics of Insulation Paper in Mineral Oil under Overloaded Transformer Conditions
Katsunori Miyagi, Hideyuki Miyahara, Etsuo Oe (Japan AE Power Systems Corporation), Naoki Yamagata (Chubu Electric Power Co., Inc.)
- A2-3 Life Management of Large Power Transformers
Xiang Zhang, Ernst Gockenbach (Leibniz Universität Hannover, Schering-Institut), Haibo Chen, Zhaolin Liu, Linghui Yang, Hua Huang, Chenzhao Fu (East China Electric Power Test And Research Institute Co., Ltd.)
- A2-4 Comparative Study of the Thermal Degradation of Synthetic and Natural Esters and a Mineral Oil - Effect of oil type, in the thermal degradation of insulating paper -
M. Augusta, G. Martins, Ana R. Gomes (Labelec), B. Pahlavanpour (Nynas Petroleum)
- A2-5 Degradation Properties of Low-viscosity Silicone Liquid/Paper Insulation Systems
Hisashi Morooka, Hiroyuki Kagawa (Hitachi, Ltd.), Akira Yamagishi, Hideyuki Miyahara, Hiroyuki Sampei, Yukiyasu Shirasaka (Japan AE Power Systems Corporation)
- A2-6 Determination of Health Index for Aging Transformers in View of Substation Asset Optimization
Brian Sparling, Jacques Aubin (GE Energy)

Oral Session A3: Transformer-2 Partial discharge (UHF, AE, antenna, etc.)

Chair: Masayuki Hikita (Kyushu Institute of Technology)

Wednesday September 8, 9:00-12:00

Venue: Room A (301)

- A3-1 Properties of Partial Discharges in Liquid Insulating Material and Computer Simulation
(invited) *Suwarno (Bandung Institute of Technology), F. Prihandoyo (Bandung Institute of Technology)*
- A3-2 Comparison of Partial Discharge Patterns between Mineral And Bio-degradable Oil Insulation Systems
Wei Yan, Toan Phung, Trevor Blackburn (University of New South Wales)
- A3-3 Detection of Similarity for Correlation in Partial Discharge Signals using Wavelet Analysis
Satoshi Matsumoto, Nobuaki Nishimura, Nobutaka Inaba, Ryuichi Ogura (Shibaura Institute of Technology)
- A3-4 Simulation on Estimating Near Field DOA of EM Waves Emitted from Partial Discharge Source in Multipath-Rich Environment by Using Focusing Technique
Ye Tian, Masatake Kawada (The University of Tokushima)

- A3-5 Influence of PD Location in Transformer Windings on IEC60270- and UHF-Measurements
Sebastian Coenen, Martin Reuter, Stefan Tenbohlen (Universität Stuttgart), Sacha Markalous (Doble Lemke GmbH)
- A3-6 Dielectric Response Analysis and PD Testing for Condition Assessment of HV Bushings
Michael Krueger, Maik Koch (OMICRON Electronics), Gunther Kopp (ABB Micafil), Michael Muhr (Technical University of Graz)
- A3-7 Measurement and Φ -q-n Analysis of Partial Discharge by a Capacitive Probe in a Dry-type Transformer
Kwang-Seok Jung, Dae-Won Park, Un-Yong Jang, Dong-Hoan Seo, Gyung-Suk Kil (Korea Maritime University)
- A3-8 Understanding the Partial Discharge Activity of a Conducting Particle of Different Shapes in Liquid Nitrogen under AC Voltages Adopting UHF Technique
Giridhar A. V., K. Sethupathi, R. Sarathi (IIT Madras)

Oral Session A4: Transformer-2 Partial discharge (UHF, AE, antenna, etc.)

Chair: Michael Muhr (Graz University of Technology)

Wednesday September 8, 13:20-15:00

Venue: Room A (301)

- A4-1 Detection and Diagnosis by Radiated Electro-Magnetic Waves from Partial Discharge Electrical Tree Development in Epoxy Resin
Hideki Ueno, Takashi Nagamachi, Masaki Nakamura, Hiroshi Nakayama (University of Hyogo), Yasuhito Hashiba (The Kansai Electric Power Co., Inc.)
- A4-2 Comparison of UHF Signal Recognition of Partial Discharges Detected by Fractal Antennas
Degui Yao (Henan Electric Power Research institute), Tianyan Jiang, Jian Li, Youyuan Wang (Chongqing University)
- A4-3 Propagation Properties of Electromagnetic Waves Emitted by Partial Discharge in Oil for Model Transformer Tank with a Practical Coil
Masahiro Kozako, Akinori Morita, Shinya Ohtsuka, Masayuki Hikita (Kyushu Institute of Technology), Shin Yamada, Yasuhiko Taniguchi (Toshiba Corporation)
- A4-4 Recognition of Single and Multiple Partial Discharge Sources in Transformer Insulation
H. H. Sinaga, B.T. Phung, T.R. Blackburn (The University of New South Wales)
- A4-5 Dissolved Gas Analysis of Transformer Oil under the Conditions of Partial Discharge and Overheating
Yutaro Abe, Masahiro Kozako, Hiroaki Toda, Motoo Tsuchie, Masayuki Hikita (Kyushu Institute of Technology), Ei Sasaki (Kitashiba Electric Co., Ltd.)

Oral Session A5:

Transformer-3 Chemical and physical analysis (DGA, furfural, etc.)

Chair: Tsuyoshi Amimoto (Mitsubishi Electric Corporation)

Wednesday September 8, 15:40-17:40

Venue: Room A (301)

- A5-1 Criteria of Fault Type Identification in Bushings Based on DGA
Irina Davidenko (Ural Federal University named after the First President of Russia B.N.Yeltsin)

- A5-2 The Diagnosis Methods in Silicone Liquid Immersed Transformers by Dissolved Gas Analysis
Hideyuki Miyahara, Akira Yamagishi (Japan AE Power Systems Corporation), Hiroyuki Sampei (Hitachi, Ltd.), Yukiyasu Shirasaka (Japan AE Power Systems Corporation), Hisashi Morooka (Hitachi, Ltd.)
- A5-3 An Advanced Technique to Diagnose Internal Faulty Parts of the Oil-filled Transformers Based on the Condensing Analysis for Trace Components Decompose from Insulating Materials.
Yasuhiko Hanamaki, Noboru Takao, Hiroyuki Nakajima, Atsushi Eto (Tokyo Electric Power Company)
- A5-4 A Novel Approach to Identify Transformer Criticality using Dissolved Gas Analysis
A. Abu-Siada, S. Islam (Curtin University of Technology)
- A5-5 Application of Fuzzy Logic Method to Interpret DGA (Dissolved Gas Analysis) Result
Harry Gumilang (PT. PLN (Persero))
- A5-6 Fire Extinction System for Transformer using Fire Retarded Insulation Fluid
Osami Sugawa (Tokyo University of Science), Kyoko Kamiya (Yokohama National University), Tomohiko Imamura (Tokyo University of Science), Akira Yamagishi, Hideyuki Miyahara (Japan AE Power Systems Corporation)

Oral Session A6:

Transformer-4 Failure phenomena and aging mechanisms & field experience

Chair: Fumihiko Miyawaki (Toshiba Corporation)

Thursday September 9, 9:00-11:20

Venue: Room A (301)

- A6-1 The Diagnosis of Power Transformer Failures by Fuzzy Random Based Rough Sets Analysis
Junzo Watada, Shamsul Bahar Yaakob (Waseda University), Tsuguhiro Takahashi, Tatsuki Okamoto (Central Research Institute of Electric Power Industry)
- A6-2 Evolved Gas from Insulating Oil at Low Temperature Heating
Kiwamu Miyajima, Takahiro Sawatsu (Aichi Electric Co., Ltd.)
- A6-3 The Influence of Corrosive Sulfur on the Oil-cellulose Paper Insulation Used in HV Transformers
Shuangzan Ren (Xi'an Jiaotong University), Lisheng Zhong (Xi'an Jiaotong University), Qinxue Yu, Xiaolong Cao (Xi'an Jiaotong University), Masahiro Hanai, Shin Yamada (Toshiba Corporation)
- A6-4 Interpretation of Dynamic Resistance Results of On-Load Tap Changers
J.J. Erbrink, E. Gulski, J.J. Smit (Delft University of Technology), R. Leich (Liandon), P.P. Seitz, B. Quak (Seitz Instruments AG)
- A6-5 Investigation on Arcing Indication of 60 MVA Power Transformer
Dian Septi Rahmani (Engineering Dept. of PLN P3B JB West Java Region), Andreas Putro Purnomoadi, Hendrik Maryono (Maintenance Dept. of PLN P3B JB West Java Region)
- A6-6 Life Extension of Power Transformer Using Moisture and Degree of Polymerization as Diagnostic Parameters
Baburao - Keshawatkar, Bhaskar Dattatrey Malpure, Venkatasami - Athikkan (Crompton Greaves Limited)

Oral Session A7: Transformer-5 FRA & on-line monitoring/diagnosis

Chair: Makoto Kadowaki (Japan AE Power Systems Corporation)

Friday September 10, 9:00-11:40

Venue: Room A (301)

- A7-1 Measurement Considerations when Using Frequency Response Methods for Condition Assessment of
(invited) Power Transformers
Matz Ohlen, Peter Werelius (Megger Sweden AB)
- A7-2 Investigation of Transformer Impedance at Transformer Limited Fault Condition by using FRA
Monitoring Technique
*Myo Min Thein, Hiroaki Toda, Masayuki Hikita (Kyushu Institute of Technology), Hisatoshi Ikeda (The University
of Tokyo), Eiichi Haginomori (Chuo University), Tadashi Koshiduka (Toshiba Corporation)*
- A7-3 Transformer Modeling Based on Frequency Response Measurements for Winding Failure Detection
*Maximilian Heindl, Stefan Tenbohlen (University of Stuttgart), Juan Velásquez, Alexander Kraetge (OMICRON
Electronics GmbH), René Wimmer (Siemens AG)*
- A7-4 A Review on the Monitoring Methods for Condition Based Maintenance of on Load Tap Changer
Narayanaperumal Arunachalam, A. Venkatasami, Anilkumar B. Bhatia (Crompton Greaves Ltd.)
- A7-5 Thermography as a Complementary Diagnostics Tool for Locating Fault in a Power Transformers
Anthony Marcel Lobo (Crompton Greaves Ltd.), Sumeet Gupta (PCI Ltd.), Bhaskar Malpure (Crompton Greaves Ltd.)
- A7-6 Solutions for Life Management and Maintenance Optimization for Large Power Transformers
*Constantin Moldoveanu (SC Nova Industrial SA), Stelian Gal (CN Transelectrica SA), Traian Fagarasan (SC
Smart SA), Victor Ursianu, Virgil Brezoianu (SC Nova Industrial SA), Ciprian Diaconu (CN Transelectrica SA),
Marius Oltean (SC Smart SA), Aurelian Vasile, Irene Ioniță (SC Nova Industrial SA), Valentin Zaharescu (CN
Transelectrica SA), Gheorghe Moraru (SC Smart SA)*
- A7-7 Enhanced Methods of High Voltage Testing of Power Transformers on Site
Janusz Szczechowski, Peter Werle (ABB)

Oral Session A8: Transformer-5 FRA & on-line monitoring/diagnosis

Chair: Wojciech Koltunowicz (OMICRON Electronics GmbH)

Friday September 10, 13:20-15:20

Venue: Room A (301)

- A8-1 Multi Channel On-line Monitoring System for Power Transformers
Ernst Gockenbach, Alireza Setayeshmehr, Hossein Borsi (Leibniz Universität Hannover, Schering-Institut)
- A8-2 Control and Supervisory System for the Live Management of On-load Tap-changers
Karsten Viereck, Dieter Dohnal (Reinhausen Group)
- A8-3 Monitoring of the Oven Drying Process of Power Transformers by Dielectric Response Analysis
Maik Koch, Stephanie Raetzke (OMICRON Electronics), Stefan Tenbohlen (University of Stuttgart)

- A8-4 Localization of PD Sources inside Transformers by Acoustic Sensor Array and UHF Measurements
Sebastian Coenen, Stefan Tenbohlen (Universität Stuttgart), Falk-Rüdiger Werner, Sacha Markalous (Doble Lemke GmbH)
- A8-5 Condition Monitoring in New Zealand Power Transformers – A short survey
Sujeewa Nilendra Hettiwatte (Manukau Institute of Technology), Hasitha Anandin Fonseka (Transpower New Zealand Ltd.)
- A8-6 Power Transformers Health Assessment with Fuzzy Logic Reasoning Due to Uncertainty in Test Data
Muhammad Arshad (BC Hydro), Syed Islam (Curtin University of Technology)

Oral Session B1: Cable-1 PD measurement technique

Chair: Harry Orton (IEEE/DEIS)

Tuesday September 7, 13:20-15:00

Venue: Room B (302)

- B1-1 Partial Discharge Measurements and Calibration: Limits and Perspectives for Power Cables
(invited) Andrea Cavallini, Gian Carlo Montanari (University of Bologna), Marco Tozzi (TechImp Spa)
- B1-2 Development of PD Location System of Power Cable Incorporating PD Charge Distribution Measurement by Utilizing GPS and Atomic Clocks
Tomohiko Katayama, Masahiro Kozako, Masayuki Hikita (Kyushu Institute of Technology), Kazutoshi Abe, Hiroshi Suzuki (J-Power Systems Corp.)
- B1-3 Analysis of Partial Discharge in HV Power Cables Consisting Cross-Bonding Joints
Buyung Sofiarto Munir (PT PLN (persero) Research and Development), Edward Gulski, Johan J. Smit (Delft University of Technology)
- B1-4 AC Voltage Test and Partial Discharge Measurement after Installation of XLPE Cable Lines
Jiro Kawai, Hirotaka Togashi, Iwao Ootaka, Mikio Makino (EXSYM Corporation)
- B1-5 A Comparison of Noise Reduction Techniques for Online Monitoring of Partial Discharge in High Voltage Power Cables
Raji Ambikairajah, B. Toan Phung, Jayashri Ravishankar, Trevor R. Blackburn (University of New South Wales)

Oral Session B2: Cable-2 Degradation

Chair: Ja-Yoon Koo (Hanyang University)

Tuesday September 7, 15:40-17:40

Venue: Room B (302)

- B2-1 Application of Dielectric Loss Measurements for Life Consumption and Future Life Estimation Modeling of Oil-impregnated Paper Insulation in HV Power Cables
Huifei Jin, Lukasz Chmura, Piotr Cichecki, Edward Gulski, Johan J. Smit (Delft University of Technology)
- B2-2 Development of 66kV Class XLPE Cable Degradation Diagnosis Technology
Shu Sugimoto, Yoshinori Fujimura, Shigeki Nagahara (Tokyo Densetsu Service Corporation), Mitsuhiro Watabe, Masahiko Nakade (Tokyo Electric Power Company)

- B2-3 Remained Withstand Voltage Level and Effect of Water Tree Degradation of Removed XLPE Transmission Cables with Long-term Operation
Toshihiro Takahashi, Tsuguhiro Takahashi, Takashi Kuraishi, Tatsuki Okamoto (Central Research Institute of Electric Power Industry), Sachika Tanaka, Yuuji Matsuya, Takayuki Doi (The Kansai Electric Power Co., Inc.)
- B2-4 The Influence of Accelerated Water Treeing Test on the Properties of Cross-linked Polyethylene Cable Insulating Materials
Xuetong Zhao (Xi'an Jiaotong University), Jianying Li (Xi'an Jiaotong University), Zhangbin Zhou, Shengtao Li (Xi'an Jiaotong University), Benhong Ouyang (State Grid Electric Power Research Institute), G. Chen (University of Southampton)
- B2-5 Observation of Water Trees Using Terahertz Imaging and Time-domain Spectroscopy
R. Sato, N. Fuse (Waseda University), Y. Nakamichi, G. Morita, T. Konishi (Railway Technical Research Institute), M. Mizuno, K. Fukunaga (National Institute of Information and Communication Technology), M. Tanimoto (Showa Cable Systems), Y. Ohki (Waseda University)
- B2-6 Quantitative Analyses of Polymer Ageing And Lifetime Prediction
Akihiro Koike, Taketoshi Toyoda, Atushi Hashimoto (Tokyo Electric Power Company)

Oral Session B3: Cable-3 Radiation environment

Chair: Yoshimichi Ohki (Waseda University)

Wednesday September 8, 9:00-12:00

Venue: Room B (302)

- B3-1 Degradation Mechanisms of Cable Insulation Materials by Radiation and Thermal Ageing
(invited) Tadao Seguchi, Kiyotoshi Tamura, Akihiko Shimada, Akira Idesaki, Takeshi Ohshima (JAEA), Hisaaki Kudoh (The University of Tokyo)
- B3-2 Evaluation of Oxidation due to Radiation-thermal Deterioration of Cross-linked Polyethylene by Microscopic FT-IR
Takashi Kurihara, Toshihiro Takahashi, Hiroya Homma, Tatsuki Okamoto (Central Research Institute of Electric Power Industry)
- B3-3 Effects of Gamma-ray Irradiation and Thermal Aging on the Chemiluminescence in Flame-retardant Ethylene-propylene Rubber
Naoshi Hirai, Yoshimichi Ohki (Waseda University)
- B3-4 Radiation or Thermal Accelerated Ageing and Condition Monitoring of Cables
H. Kudo (The University of Tokyo), T. Seguchi, K. Tamura, T. Ohshima, A. Idesaki, A. Shimada (Japan Atomic Energy Agency)
- B3-5 Broadband Impedance Spectroscopy as a Tool to Evaluate the Integrity of Cable Insulation
Yoshimichi Ohki, Naoshi Hirai (Waseda University)
- B3-6 Advanced Method for Cable Environmental Qualification Test
Toshio Yamamoto, Takefumi Minakawa (Japan Nuclear Energy Safety Organization)
- B3-7 Accelerated Aging Sequence for Cable Environmental Qualification Test
Toshio Yamamoto, Takefumi Minakawa (Japan Nuclear Energy Safety Organization)

- B3-8 Structural Evaluation of Low-Voltage Cable Insulators with Low Dose Rate Gamma Ray Irradiation Accelerated Ageing Tests
Yukiko Furuhashi, Yousuke Ibusuki, Teruhisa Tatsuoka, Kenrou Takamori, Hideshi Tezuka, Atsushi Hashimoto (Tokyo Electric Power Company)

Oral Session B4: Rotating machines-1 Insulation diagnosis

Chair: Greg Stone (Iris Power Engineering Inc.)

Wednesday September 8, 13:20-15:00

Venue: Room B (302)

- B4-1 Integrated Diagnostic System for Condition-based Maintenance of Generators
Mario Belec, Claude Hudon (Institut de Recherche d'Hydro-Québec), Duc Ngoc Nguyen (Hydro-Québec)
- B4-2 Effect of On-line PD Monitoring System for the Hydrogenerator Stator Winding
Oh Bong-Keun (Korea Water Resources Corporation), Kang Dong-Sik (Korea Electrotechnology Research Institute), Lim Kee-Joe (Chungbuk National University)
- B4-3 Propagation of Partial Discharge Pulse in Stator Winding of Hydraulic Turbine Generator
Satoru Miyazaki, Toshihiro Takahashi, Hisashi Goshima, Tatsuki Okamoto (Central Research Institute of Electric Power Industry), Yoshiichiro Hayashi (Electric Power Development Co., Ltd.)
- B4-4 Partial Discharge Inception on Random Wire Wound Stator Insulation: Influence of the Temperature and of the Voltage Gradient
Francesco Guastavino, Andrea Dardano, E. Torello, Alessandro Ratto (University of Genova), Guido Fulvio Massa (Ansaldo Sistemi Industriali S.p.A), Maurizio Russo (Electro Adda S.p.A.)
- B4-5 On-line Vibration and Temperature Direct Measurement on High Voltage Devices Using Fiber Optic Sensor Technology
Marc R. Bissonnette, Daniel Chen (VibroSystem)

Oral Session B5: Rotating machines-2 Partial discharge diagnosis

Chair: Yong-Joo Kim (Korea Electrotechnology Research Institute)

Wednesday September 8, 15:40-17:00

Venue: Room B (302)

- B5-1 Continuous PD Monitoring of Stator Insulation
(invited) Wojciech Koltunowicz, Alija Obralic, Alexander Belkov, Ronald Plath (OMICRON Electronics GmbH)
- B5-2 Partial Discharge Diagnosis of Stator Insulation using Damped AC Voltages
Corné van Eeden, Edward Gulski, Johan J. Smit (Delft University of Technology), Ben Quak (Seitz Instruments AG), Frank de Vries (Liandon B.V.)
- B5-3 Online and Offline Diagnostics as a Successful Interaction for CBM on Turbo-generators
Guido Schmidt, Dagmar Thien, Frank Ewert, Martin Biesemann, Peter Gradinarov (Siemens AG)
- B5-5 Integrated Insulation Condition Monitoring of Generators and Transformers
Bernhard Fruth, Herbert Looser (QUALITROL), Matthias Humer (E.on Anlagenservice GmbH)

Oral Session B6: Cable-4 Diagnostics

Chair: John Densley (ArborLec Solutions Inc.)

Thursday September 9, 9:00-11:20

Venue: Room B (302)

- B6-1 The Effectiveness of PD-OL, an On-Line PD Monitoring System with PD Location for Long mv Underground Power Cables
Steennis, E. Fred, Wielen, Peter C.J.M. van der (KEMA)
- B6-2 Benefits of a Combined Diagnostic Method, using VLF Partial Discharge and Dissipation Factor Measurement on Medium Voltage Distribution Cables
Martin Baur (Baur Pruef-Und Messtechnik GmbH), Christian Goy (Vattenfall Europe Berlin Netservice GmbH), E. Whittaker (Western Power)
- B6-3 Application of the Innovative Residual-charge Method to 22/33kV XLPE Cable in Line
Hiroyuki Kon (VISCAS Corp.), Kouichi Sato, Koichi Onuki (Tokyo Electric Power Co., Inc.)
- B6-4 Development of External Diagnosis for Terminals in XLPE Cables (Part II)
Takaharu Kohama, Yukinobu Morishita (Chubu Electric Power Co., Inc.), Tadanori Nagayama, Masato Watanabe (Tohoku Electric Power Co., Inc.), Kazutoshi Abe, Hiroshi Suzuki (J-Power Systems Corp.)
- B6-5 Basic Study of On-site Insulation Diagnosis of Power Apparatus using Resonant Power Source
Takashi Kuraishi, Tatsuki Okamoto, Toshihiro Takahashi, Satoru Miyazaki, Hiroshi Suzuki (Central Research Institute of Electric Power Industry)
- B6-6 Site Installation Experience of Underground Cable Safety Monitoring System using DTS and DRS
Sungmin Park, Seongkook Choi, Youngkwan Kim, Dongseok Hong (Taihan Electric Wire Co., Ltd.), Seongweon Kim, Jehyeong Lee (Korea Electric Power Corporation)

Oral Session B7: Optical sensor

Chair: Masao Takahashi (Toshiba Corporation)

Friday September 10, 9:00-11:40

Venue: Room B (302)

- B7-1 Pockels Non-Contact Voltage Sensor and Piezoelectric Vibration Control of Pockels Crystal
Hirokazu Matsumoto, Shigeyasu Matsuoka, Akiko Kumada, Kunihiko Hidaka (The University of Tokyo)
- B7-2 Concept of Optical VT and CT for GIS
Wei Zhang, Junzo Kida (Japan AE Power Systems Corporation), Tatsushi Yamaguchi, Daigoro Shiozawa (Toko Electric Corporation)
- B7-3 Development of Magneto-Optic Probe for the Eddy Current Detection
Sadao Higuchi, Hiroyuki Fukutomi, Masahiro Kurono, Takashi Ogata (Central Research Institute of Electric Power Industry)
- B7-4 Study on On-line Monitoring System of Very Small Deterioration Signal Caused by Water Tree in XLPE Cables- Trial of Compensation Method to Expand Dynamic Range of Measurement -
Tsuguhiro Takahashi, Tatsuki Okamoto (Central Research Institute of Electric Power Industry)

- B7-5 Development of an Optical Fiber Current Sensor with Improved Output Stability against Disturbances to the Optical Fibre Transmission Line
Reishi Kondo, Kiyoshi Kurosawa (Tokyo Electric Power Company), Eiji Itakura, Takashi Kotake, Yuuki Shiino (Takaoka Electric MFG. Co., Ltd.)
- B7-6 Optical Current Sensor System by Passive Bias Method using Birefringence of Polarization Maintaining Optical Fiber
Woo-young Lee, Ki-Dong Song, Yong-sung Cho (Korea Electrotechnology Research Institute)
- B7-7 Digital Instruments Transformer for UHV AC and DC Networks
Denis Chatrefou, Jim Blake, Mehamed Boucherit (Areva T&D)

Oral Session B8: Optical sensor

Chair: Tsuguhiro Takahashi (Central Research Institute of Electric Power Industry)

Friday September 10, 13:20-15:00

Venue: Room B (302)

- B8-1 Interferometric Fiber-optic Electric Current Sensor for Railway Power System
Tatsuya Kumagai, Wataru Ohnuki (Hitachi Cable, Ltd.), Takeshi Endo (Hitachi, Ltd.), Hitoshi Hayashiya (East Japan Railway Company), Kouji Nishida (Eiraku Electric Co., Ltd.)
- B8-2 Basic Technique of Optical CTs and Development of Optical CTs for Protection
Daigoro Shiozawa, Tatsushi Yamaguchi (Toko Electric Corporation), Toshiaki Rokunohe (Hitachi, Ltd.), Junzo Kida, Wei Zhang (Japan AE Power Systems Corporation)
- B8-3 DC Optical Current Transformer for HVDC Link
Masao Takahashi, K. Sasaki, Yukihisa Hirata, T. Muraio, H. Takeda (Toshiba Corp.), Yoshiyuki Nakamura (Electric Power Development Co.,Ltd.), T. Ohtsuka, T. Sakai, N. Nosaka (Electric Power Development Co., Ltd.)
- B8-4 Development of the Fault Detection System Using Optical Fiber Current Sensors with the Wavelength Division Multiplexing Transmission
Masahiro Kayaki, Toshinari Hirata (The Kansai Electric Power Co., Inc.), Kiyoshi Kurosawa, Reishi Kondo (Tokyo Electric Power Co., Inc.), Toshiharu Yamada, Eiji Itakura (Takaoka Electric MFG. Co., Ltd.)
- B8-5 Fault Location System for Power Transmission Lines applying Optical Fiber Current Sensors
Kazuo Amano (Fujikura Ltd.), Tatsushi Yamaguchi (Toko Electric Corporation), Reishi Kondo (Tokyo Electric Power Co., Inc.)

Oral Session C1: Switchgears-1 Diagnosis/sensors and sensing techniques

Chair: Uwe Riechert (ABB Schweiz)

Tuesday September 7, 13:20-15:00

Venue: Room C (303)

- C1-1 Partial-discharge Recognition in Three-Phase GIS using Neural Network
Deny Hamdani (Bandung Institute of Technology), Umar Khayam (Bandung Institute of Technology / Kyushu Institute of Technology), Suwarno (Bandung Institute of Technology), Masahiro Kozako, Masayuki Hikita (Kyushu Institute of Technology), Nobuko Otaka (Japan AE Power Systems Corporation), Yoshiki Takehara (Hitachi Engineering and Services)

- C1-2 A Non-Intrusive Diagnostic Approach to Prevent Circuit-Breaker Critical Failures
Sébastien Poirier, Ryszard Pater (Hydro-Quebec Research Institute), René Doche (Hydro-Quebec TransEnergie)
- C1-3 Survey and Research on Deterioration of 300kV GCB
Tatsuo Kobayashi, Toshifumi Sugimoto (Chubu Electric Power Co., Inc.), Kozo Matsushita, Hideaki Shirai (Toshiba Corporation)
- C1-4 Application of Online PD Monitoring System Using HF/UHF PD Sensors for GIS and Cable
Chen Min, Koji Urano, Tang Jian, Qui Zhongwei (SE Technology Limited), Atsuhide Jinno (J-Power Systems Corp.)
- C1-5 Severity Diagnosis and Assessment of the Partial Discharge Provoked by Free Moving Metallic Particles on GIS Insulator Surface
Bo Qi, Chengrong Li, Zhyguo Tang, Bibo Geng, Zhen Hao (North China Electric Power University)

Oral Session C2: Switchgears-2 Partial discharge (UHF, AE, antenna, etc.)

Chair: Hiroyuki Hama (Mitsubishi Electric Corporation)

Tuesday September 7, 15:40-17:20

Venue: Room C (303)

- C2-1 Influence of Different Diameter Bus Conductor Part of GIS on Propagation Property of PD-Induced
(invited) Electromagnetic Wave
Masayuki Hikita, Yohei Yamamura, Masahiro Kozako, Masayuki Hayashi, Shinya Ohtsuka (Kyushu Institute of Technology), Toshihiro Hoshino, Shiro Maruyama, Takaaki Sakakibara (Toshiba Co.)
- C2-2 Propagation Mechanisms of PD Pulses for UHF and Traditional Electrical Measurements
Stefan M Hoek, Maik Koch (OMICRON Electronics GmbH), Maximilian Heindl (University of Stuttgart)
- C2-3 Partial Discharge Signal Evaluation of UHF Technique in Accordance with Current Pulse Waveform Measurement
Masanobu Yoshida (Chubu Electric Power Co., Inc.), Keisuke Suzuki, Hiroki Kojima, Naoki Hayakawa, Masahiro Hanai, Fumihiko Endo, Hitoshi Okubo (Nagoya University)
- C2-4 Sensitivity Characteristics of Various UHF Sensors Attached Outside a GIS Tank
Shiro Maruyama, Toshihiro Hoshino, Takaaki Sakakibara (Toshiba Corporation), Tomoyuki Mizojiri, Hiroshi Murase (Aichi Institute of Technology)
- C2-5 Fundamental Characteristics of Electromagnetic Wave Propagation in Non-reflection Coaxial Waveguide Output Characteristics of UHF Sensor in L-shaped Structure
Junichi Wada, Genyo Ueta, Shigemitsu Okabe (Tokyo Electric Power Company)

Oral Session C3: Insulating materials

Chair: Abderrahmane Beroual (Ecole Centrale de Lyon)

Wednesday September 8, 9:00-11:40

Venue: Room C (303)

- C3-1 High Voltage Dielectric Characteristics of Epoxy Nano-composites in Liquid Nitrogen for (invited) Superconducting Equipment
Young-jo Lee, Sang-hwa Lee, Woo-ju Shin, Hae-young Lee, Bang-wook Lee, Ja-yoon Koo (Hanyang University)
- C3-2 LDPE Nanocomposites: a Study about Breakdown Strength and Voltage Endurance
Francesco Guastavino, Andrea Dardano, Stefano Squarcia (University of Genova), Pilar Tiemblo, Julio Guzman, Nuria Garcia (Institute of Polymer Science and Technology)
- C3-3 Simultaneous Measurement of Space Charge Distribution and Thickness in Dielectric Materials
Masumi Fukuma, Ruji Funo (Matsue College of Technology), Yoshinobu Murakami, Masayuki Nagao (Toyoashi University of Technology), Naohiro Hozumi (Aichi Institute of Technology)
- C3-4 Dynamic Behavior of Space Charge in an Aged 110kV XLPE Cable Insulation
Boxue Du, Lin Yang, Hongbo Li, Yu Gao (Tianjin University)
- C3-5 Space Charge Accumulation and Breakdown of LDPE with Acetophenone under High DC Stress at Various Temperatures
Junichi Yoshida, Kazuki Matsushima, Hiroaki Miyake, Yasuhiro Tanaka, Tatsuo Takada (Tokyo City University)
- C3-6 Investigation on Electrical Trees Growth and Partial Discharge Characteristics in XLPE Cable Insulation at Power Frequency Applied Voltage
X. R. Chen, Y. Xu, L. B. Hu, M. Wang, W. H. Yang, Y. Liu, X. L. Cao (Xi'an Jiaotong University)
- C3-7 Influence of Fillers in PTFE Insulators on the Characteristics of Surface Discharges in Presence of Different Gases and Mixtures
Abderrahmane Beroual (Ecole Centrale de Lyon), Mamadou Lamine Coulibaly, Oana Aitken, Alain Girodet (Areva T&D)

Oral Session C4: Outdoor insulation

Chair: Josef Kindersberger (Technische Universität München)

Wednesday September 8, 13:20-15:00

Venue: Room C (303)

- C4-1 Detection of Defects in Porcelain Insulators in Service
A. Dornfalk, I. Gutman, G. Olsson (STRI AB)
- C4-2 Development of a Diagnostic Device for Malfunctions of Distribution Facilities Using Acoustic Emission Testing
Masahito Miyata, Norihiro Kusaka, Nobuhiro Kuroda (Tokyo Electric Power Company)
- C4-3 The Effect of Conductive And Normal RTV on Electric Field Intensity of Porcelain Insulator
Gang Chen (Shenyang University of Technology), Yu Qin, Min Liu, Zhidong Jia, Zhicheng Guan (Tsinghua University), Shun Yuan (Shenyang University of Technology)

- C4-4 Influence of the Relative Humidity on the DC Potential Distribution of Polymeric Cylindrical Model Insulators
Bernhard Lutz, Josef Kindersberger (Technische Universität München)
- C4-5 The Study of Ageing of Silicone Rubber and EPDM Insulation under Dust with Ozone and Temperature
Apisit Chaisaengsukkul, Vijit Kinnares, Norasage Pattanadej (King Mongkut's Institute of Technology)

**Oral Session C5:
Switchgears-3 Asset management/failure phenomena and aging/others
Chair: Tokio Yamagiwa (Japan AE Power Systems Corporation)
Wednesday September 8, 15:40-17:20
Venue: Room C (303)**

- C5-1 Risk Estimation for H.V. Components in Gas-Insulated Substations
Muhannad Al-Suhaily, Sander Meijer, Johan J. Smit (Delft University of Technology), Peter Sibbald, Jos Kanters (TenneT TSO B.V.)
- C5-2 Circuit Breaker Maintenance Method Optimization
Indera Arifianto, Yokeu Wibisana (PT. PLN (Persero) P3B JAWA BALI)
- C5-3 Fault Diagnosis of High Voltage Circuit Breaker Based on Vibration and Contact Resistance Measurements
Parmatma Dubey, Vishal Waghmare, A. Venkatasami, D. Srinivas (Crompton Greaves Ltd.)
- C5-4 Study on Electrical Characteristics of ZnO Micro Particles Used in Air Bushings
Mahmudul Kabir, Masafumi Suzuki, Noboru Yoshimura (Akita University), Kayo Shiozawa, Miyuki Ogishima (Showa Cable Systems Co., Ltd.), Hideyasu Andoh (Toshiba Corp.)
- C5-5 Evaluation of Breakdown Characteristics of CO₂ Gas for Non-standard Lightning Impulse Waveforms in the Presence of Bias Voltages
Genyo Ueta, Junichi Wada, Shigemitsu Okabe (Tokyo Electric Power Company)

**Oral Session C6: PD diagnostic methods
Chair: Gian Carlo Montanari (University of Bologna)
Thursday September 9, 9:00-11:20
Venue: Room C (303)**

- C6-1 Effects of Rising Rate of Square Voltage on PD Characteristics in Aging Process
(invited) Kai Wu, Cheng Pan, Minggang Gao, Changhao Sun, Yongpeng Meng (Xi'an Jiaotong University)
- C6-2 An Integral Equation for Analysis of Partial Discharge Characteristics at High Voltage Condition
Tatsuki Okamoto, Takashi Kuraishi, Satoru Miyazaki, Toshihiro Takahashi (CRIEPI)
- C6-3 Novel Method for 3-phase Simultaneous Partial Discharge Detection in Power Cables
Jeongtae Kim, Jaecheol Jeong (Daejin University), Sungkwun Oh (University of Suwon), Jihong Kim (Calvus Instrument), Jayoon Koo (Hanyang University)

- C6-4 PD Localization in High Voltage Insulation Using the UHF Technique
Botov S., Sofyina N., Rusov V. (Vibrocenter), Zhivodernikov S., Lavrov V. (Electrogridservice)
- C6-5 Static Electrification Caused by Deterioration of Insulation Paper in Aged Transformers
Atsushi Eto, Hiroyuki Nakajima, Takayuki Kobayashi (Tokyo Electric Power Company)
- C6-6 Partial Discharge Assessment in Online MV Networks: How to Interpret Results?
Marco Tozzi (Techimp Systems), Andrea Cavallini, Gian Carlo Montanari (University of Bologna)

Oral Session C7: New developments in asset management

Chair: Johan Smit (Delft University of Technology)

Friday September 10, 9:00-12:00

Venue: Room C (303)

- C7-1 Optimum Strategy of Power System Maintenance and Operation with Intelligent Grid Management System (IGMS)
Hiroki Kojima, Yotaro Suzuki, Kaio Wakaiki, Naoki Hayakawa, Masahiro Hanai, Fumihiro Endo, Hitoshi Okubo (Nagoya University)
- C7-2 The Development of Asset Management Decision Tools for HV SCFF Cable Circuits
K.R. Hooft van Huysduynen, E. Gulski, J.J. Smit, Lukasz Chmura (Delft University of Technology), Frank De Vries, Allois Bun (Liander Asset Management)
- C7-3 Results of a Study of Overhead Line Conductors Under Combined Thermal and Mechanical Stress
Stefan Jaufer, Thomas Judendorfer, Stephan Pack, Michael Muhr (Graz University of Technology)
- C7-4 The Risk Assess Method of Power Transformer
Huimin He (North China Electric Power Research Institute Co., Ltd.), Yangchun Cheng, Chengrong Li (North China Electric Power University)
- C7-5 A Novel Inductive Electromagnetic Energy Harvester for Condition Monitoring Sensors
Nina Roscoe, Martin Judd (University of Strathclyde), Leigh Fraser (National Grid)
- C7-6 Critical Perspectives on Paper Ageing and Condition Monitoring for Old Power Transformer Populations
Hongzhi Ding, Richard Heywood, John Lapworth, Simon Ryder, Alan Wilson (Doble PowerTest Ltd.)
- C7-7 An Integrated Adaptive Maintenance Concept
Martin Aronsson, Markus Bohlin, Kivanc Doganay, Anders Holst (Swedish Institute of Computer Science), Tommy Kjellqvist, Stefan Östlund (Royal Institute of Technology)
- C7-8 Obtaining Value From On-line Substation Condition Monitoring – CIGRÉ WG considerations (On behalf of CIGRÉ WG B3-12)
Andre Mercier (IREQ), Arthur J Mackrell (GE Infrastructure Energy - Transmission and Distribution), Nicolaie L. Fantana (ABB AG Corporate Research)

Oral Session C8: Overhead transmission lines

Chair: Shengtao Li (Xi'an Jiaotong University)

Friday September 10, 13:20-15:20

Venue: Room C (303)

- C8-1 Review on Increase of Allowable Current for Conductors
Yoshiyuki Saito, Masanori Isozaki (Tokyo Electric Power Company), Koji Nagano (J-Power Systems Corporation)
- C8-2 Combined In-situ Infrared Measurement and Numerical Thermal Analysis for the Diagnostic of Overhead Line Joints
Mohamed Chaaban, Christophe Comte, Stephan Beuregard, Yves Blanchette (Institut de Recherche d'Hydro-Québec), Andr Leblond, Bernard Panaroni (Hydro Québec TransÉnergie)
- C8-3 On-line Monitoring Method for Overvoltage of Overhead Transmission Lines
Du Lin, Chang Afei, Sima Wenxia, Yang Qing (Chongqing University)
- C8-4 A Wavelet-Based Method for Real-Time Transient Disturbance Detection
Flavio Bezerra Costa, Benemar Alencar Souza, Nubia Silva Dantas Brito (Federal University of Campina Grande)
- C8-5 Assessment of Electrical and Mechanical Condition of High Voltage Transmission Lines
Stelian Gal (CN Transelectrica SA), Constantin Moldoveanu (SC Nova Industrial SA), Roman Bernard (FLYCOM d.o.o.), Theodor Stoenescu (CN Transelectrica SA), Irene Ioniță (SC Nova Industrial SA), Peter Arnez, Constantin Matea (CN Transelectrica SA)
- C8-6 Application of Finite Element Method (FEM) to Study Induced Current Densities on Utility Poles
H. L. Rasara, K. L. Wong (RMIT University)

Poster Session P1

Tuesday September 7, 18:00-20:00

Venue: Venue: Lobby (3rd & 4th Floors)

Cable

- P1-1 Study on Pulse Response Aiming to Water Tree Diagnosis for Power Cables with Spatial Resolution
Taizo Tsuji, Katsumi Uchida (Chubu Electric Power Co., Ltd.), Naohiro Hozumi, Susumu Hiei (Aichi Institute of Technology), Takashi Kurihara, Tatsuki Okamoto (Central Research Institute of Electric Power Industry)
- P1-2 Insulation Evaluation of Water Tree Aged 10kV XLPE Cable by Thermal Pulse Method
Boxue Du, Li Wang, Hongbo Li, Lin Yang, Yu Gao, Jingbo Li (Tianjin University)
- P1-3 On-line Monitoring System of Conductor Temperature for 220kV XLPE Cable
Boxue Du, Meng Liu, K. Zhang (Tianjin University)
- P1-4 Influence of the Thermal Stress on the Diagnostic Parameters of PILC Cables
Ivana Mladenovic, Christian Weindl (University of Erlangen-Nuremberg)
- P1-5 Practical Aspects of On-site Testing and Diagnosis of Transmission Power Cables in China
Edward Gulski, Piotr Cichecki (Delft University of Technology), Zhao Jiankang, Xia Rong (EPRI), Rogier Jongen, Paul Petrus Seitz (Seitz Instruments AG), Andreas Porsche, Li Huang (SebaKMT)

- P1-6 Effect of Antioxidants in Radiation or Thermal Accelerated Ageing of Polymer Materials for Cables
H. Kudo (The University of Tokyo), T. Seguchi, K. Tamura, T. Ohshima, A. Idesaki, A. Shimada (Japan Atomic Energy Agency)
- P1-7 The Latest Applications of Fiber-Optic Distributed Temperature Sensing System To Underground Power Cable Lines
Tsuyoshi Igi, Hidehiko Komeda, Keishi Sakurai (J-Power Systems Corporation)
- P1-8 Thermal Analysis of Cables in Tunnel Using SUPG Finite Element Method
Liang Yongchun, Wang Zhongjie, Liu Jianye, Sun Lihua (Hebei University of Science and Technology)
- P1-9 Thermal Analysis of Underground Power Cables with Consideration of Moisture Transfer in the Soil using Nonlinear Finite Element Method
Liang Yongchun, Wang Zhongjie, Liu Jianye, Sun Lihua (Hebei University of Science and Technology)
- P1-10 Investigation on Electrical Characteristics of HDPE Mixed with EVA Applied for Recycleable Power Cable Insulation
Hung Kyu Lee (Chungju National University), Han Joo Lee, Eui Hwan Jung, Jae Hun Yoon, Kee Joe Lim (Chungbuk National University)
- P1-11 Activation Energy to Be Used in Cable Environmental Qualification Test
Toshio Yamamoto, Takefumi Minakawa (Japan Nuclear Energy Safety Organization)
- P1-12 Determination of Electric Field Distribution at High Voltage Resistive-capacitive Cable Terminations
Nazar Hussain Malik, Abdulrehman Ali Al-Arainy, Mohammed Iqbal Qureshi, F. R. Pazheri (King Saud University)
- P1-13 Irradiation Condition on Accelerated Ageing Test of Cable Designed for Nuclear Power Plants
Akihiko Shimada (Japan Atomic Energy Agency), Hisaaki Kudo (The University of Tokyo), Akira Idesaki, Takeshi Ohshima, Kiyotoshi Tamura, Tadao Seguchi (Japan Atomic Energy Agency)
- P1-14 Aging Factors to be Considered in Cable Environmental Qualification Test
Toshio Yamamoto, Takefumi Minakawa (Japan Nuclear Energy Safety Organization)
- P1-15 The Experimental Study of the PD and Interference Signals Transmission Characteristics in the Cross-bonding Link-system with the Capacitor Sensor
Wei Wang (North China Electric Power University), Chong Liu (Wenzhou Electric Power Supply Bureau), Heng Sui, Chaofei Gao, Zan Wang (North China Electric Power University)
- P1-16 On-line Temperature Monitoring of 10kV Underground Cable in Pipe Based on DTS Technology
Yan-ling Zheng (Xi'an Jiaotong University / Baoji University of Arts and Sciences), Tao Yi, Guan-Jun Zhang (Xi'an Jiaotong University), Yan-Hui Zhang, Feng-Min Yang (Henan Zhengzhou Power Supply Company), Wei Song (Electric Power of Henan)
- P1-17 Condition Assessment of PVC Insulated Low Voltage Cables By Voltage Response Method
Zoltán Ádám Tamus, Endre Németh (Budapest University of Technology and Economics)
- P1-18 The Role of Small Partial Discharges in the Degradation of Polymeric Insulation
Michael G. Danikas (Democritus University of Thrace)

- P1-19 Estimation of Dielectric Loss using Damped AC Voltages
Richard Houtepen, Edward Gulski, Johan J Smit, Lukasz Chmura (Delft University of Technology), Ben Quak (Seitz Instruments AG)
- P1-20 Measurement and Analysis of Partial Discharges on Effects of CNCV-W Cable
Jae-Hun Yoon, Jin-Heon Oh (Chungbuk National University), Sung-Hwa Kang (Chungcheong University), Han-Sik Choi, Sang-Jin Ji (Small and Medium Business Administration), Kee-Joe Lim (Chungbuk National University)
- P1-21 Fault Analysis of GIS Cable Terminal Kit in Railway Power System
Kang-Won Lee, Dong-Uk Jang, Jai-Kyun Mok (Korea Railroad Research Institute)
- P1-22 Proposal of Measurement Technique for Electromagnetic Field Intensity Distribution Generated by Partial Discharge
Noritaka Chiyo, Mizuki Arai, Yasuhiro Tanaka (Tokyo City University), Atsuhiko Nishikata, Takuichi Hirano (Tokyo Institute of Technology), Takashi Maeno (National Institute of Information and Communications Technology)
- P1-23 Dielectric Loss Measurement of Power Cables Using Hamon Approximation
Daniel Goetz, Hubert Schlapp, Frank Petzold, Hein Putter (SebaKMT)
- P1-24 Partial Discharge Experiments of MV Cable Joints with Artificial Defect
Wenjie Li, Junhua Luo, Rong Xia, Jiankang Zhao, Shaoxin Meng (State Grid Electric Power Research Institute), Yun Jiang (Shanghai Cable Transmission & Distribution Company)
- P1-25 Experiences of Partial Discharge Measurement in EHV XLPE Power Cable System
Takenori Nakajima, Noboru Ishii, Tetsuo Matsumoto, Hideo Tanaka, Hiroyuki Kon, Kiyomi Adachi (VISCAS Corporation)

Common techniques

- P1-26 Advancement and Sophistication of the Maintenance Technologies in Power Distribution Facilities
Technical committee of Advancement and Sophistication of the Maintenance Technologies in Power Distribution Facilities (Electric Technology Research Association)
- P1-27 Measures and Methods of Field Grading for High Voltage Electrical Equipment
Michael Walch, Jürgen Fabian, Michael Muhr (Graz University of Technology)
- P1-28 Simulation of Partial Discharges in Voids by Fluid Continuity Equation
Kai Wu, Kai Qin, Zenghui Han, Yongpeng Meng, Yonghong Cheng (Xi'an Jiaotong University)
- P1-29 Localization of Multiple Partial Discharge Sources using Maximum Likelihood Estimation
Hirokazu Ishimaru (Nagoya Institute of Technology), Masatake Kawada (The University of Tokushima)
- P1-30 Continuous Wave Terahertz Imaging Method for Ion Migration Detection
Hongbing Zhang, Kazutaka Mitobe, Masafumi Suzuki, Noboru Yoshimura (Akita University)
- P1-31 Risk-based Maintenance Assessment Using Probabilistic Model
Masashi Kitayama (Mitsubishi Electric Corporation)
- P1-32 Laboratory Measurements for Power System Condition Monitoring
Donald G. Kasten, Stephen A. Sebo (The Ohio State University), John L. Lauletta (Exacter, Inc.)

- P1-33 A Hybrid Neural Network Approach for Solving Bilevel Programming Problems in a Power System Environment
Shamshul Bahar Yaakob (Waseda University, Universiti Malaysia Perlis), Junzo Watada (Waseda University), Takahashi Tsuguhiro, Tatsuki Okamoto (Central Research Institute of Electric Power Industry)
- P1-34 Study of Decision Support Programs for Maintenance Strategy of Electric Power Equipment
Tsuguhiro Takahashi, Takashi Kuraishi, Tatsuki Okamoto (Central Research Institute of Electric Power Industry)
- P1-35 An On-line Operating Management Platform for Energy-saving of Thermal Power Plant
Bin Li, Jianhua Liu (North China Electric Power University)
- P1-36 Development of Electric Safety Monitoring System for Traditional Markets using Electrical Safety Factor
Gi Hyun Kim, Sang Ick Lee, Seong Su Shin, Suk Myong Bae (Electrical Safety Research Institute of KESCO)
- P1-37 Surface Discharge on Polymer Materials under HVAC in Different Gaseous Environments
Hai-Bao Mu, Guan-jun Zhang (Xi'an Jiaotong University), Shota Suzuki, Yasuhiro Tanaka (Tokyo City University)
- P1-38 The High Frequency Characteristic of Wideband Rogowski Coil with Low Frequency Ferrite Core
Yangchun Cheng, Wei Liu, Ping Li, Chengrong Li (North China Electric Power University)
- P1-39 Thermal Effects of Electromagnetic Energy Concentration inside Metallic and Dielectric Structures
Romeo Ciobanu, Radu Damian, Cristina Schreiner (Technical University Iasi)
- P1-40 The Aging Diagnosis of HFPD Using the Delta-F Reformation for Pattern Recognition of Discharge
Jang-seob Lim, Seong-ho No, Ji-sun Kim (Mok-po National Maritime University), June-ho Lee (Hoseo University)
- P1-41 “Tester Pen” to Analyze Twisted Pairs in Telecom Cabinets
Fabio Gro, Fabio Pizzuti (Telecom Italia Spa Open Access Database & System Requirements)
- P1-42 Real-time Quality Monitoring of Arc Welding using Input Impedance
Wong Yoke-rung, Ling Shih-fu (Nanyang Technological University), Wee Keng-hwee (Sembcorp Marine Technology Pte Ltd.), Baba Osamu (Jurong Shipyard Pte Ltd.)

Switchgears

- P1-43 Simulation of Electrical Tree Propagation in Nanocomposite Polymers: Homocharges, Heterocharges and the Role of Nanoparticles
Despoina Pitsa, George Vardakis, Michael Danikas (Democritus University of Thrace)
- P1-44 Development of Digital Panel Board Include Communications Function
Sang-Ick Lee, Seong-Su Shin, Gi-Hyun Kim, Suk-Myeong Bae (Korea Electrical Safety Corporation)
- P1-45 Removal of Oxide Layer on Metal Surface using Cathode Spot in Vacuum Arc for Reuse
Toru Iwao, Shinya Kamishima, Masashi Namba, Naoko Ogura, Motoshige Yumoto (Tokyo City University)
- P1-46 Optimum Maintenance Strategies Based on Circuit Breaker Diagnoses for Total Cost Minimization of Electric Power System Operation
Yotaro Suzuki, Kaio Wakaiki, Hiroki Kojima, Naoki Hayakawa, Masahiro Hanai, Fumihiko Endo, Hitoshi Okubo (Nagoya University)
- P1-47 Partial Discharge Detection of GIS by the Time Series Index Approach under Experimental Verification
Cheng-chien Kuo, Fu-Hsien Chen, Chun-te Chen (St. John's University)

- P1-49 Sensitivity Evaluation of Different Types of PD Sensors for UHF-PD-Measurements
Alexander Troeger, Uwe Riechert (ABB Switzerland Ltd.), Simon Burow, Stefan Tenbohlen (University of Stuttgart)
- P1-50 Particle-initiated Partial Discharge Characteristics for GIS Diagnosis
Keisuke Suzuki, Motoki Asai, Hiroki Kojima, Naoki Hayakawa, Masahiro Hanai, Fumihiko Endo (Nagoya University), Masanobu Yoshida (Chubu Electric Power Co., Inc.), Hitoshi Okubo (Nagoya University)
- P1-51 Mechanical Properties Detection of Circuit Breaker Based on High Speed Digital Camera
Wei Wang, Qi Li, Fei Fan (North China Electric Power University), Xingquan Huang (Henan Electric Power Research Institute), Chengrong Li (North China Electric Power University)
- P1-52 Two Level On-line Monitoring System To Reduce GIS Components Failure
Muhammad Al-suhaily, Sander Meijer, Johan J. Smit (Delft University of Technology), Peter Sibbald, Jos Kanter (TenneT TSO B.V.)
- P1-53 An Influence of New Arc Quenching Methods for Improving the Interrupting Capability of Low Voltage Circuit Breaker
Kil sou Kim (LS Industrial System Co., Ltd.), Sung Hoon Cho, Kee Jeo Lim (Chungbuk National University), Seung Hwa Kang, (Chungcheong University)
- P1-54 Study of the Application of PTC Elements for Molded Case Circuit Breakers
Kil Sou Kim (LS Industrial System), Jin Heon Oh, Kee Jeo Lim (Chungbuk National University), Seung Wha Kang (Chungcheong University)
- P1-55 Attenuation Characteristics of Electromagnetic Waves Due to Partial Discharges in a GIS Using Different Types of PD-Detecting Coupler
T. Hoshino, S. Maruyama, T. Sakakibara (Toshiba Corporation), S. Ohtsuka, M. Hikita (Kyushu Institute of Technology), G. Ueta, S. Okabe (Tokyo Electric Power Company)
- P1-56 New Approach to Calibration of PD Magnitude Regarding GIS using Three-Dimensional Electromagnetic Analysis
Toshihiro Hoshino, Shiro Maruyama, Takaaki Sakakibara (Toshiba Corporation)
- P1-57 Partial Discharge Testing for Distribution Switchgears
Yuan Tian, Neil Davies, David Russell (EA Technology Ltd.)
- P1-58 Detection of SF₆ Decomposition Gases Generated by HVDC Partial Discharges using Carbon Nanotube Gas Sensor
Yul Martin, Zhenyu Li, Takuya Tsutsumi (Kyushu University), Kiminobu Imasaka (Kyushu Sangyo University), Junya Suehiro (Kyushu University), Shinya Ohtsuka (Kyushu Institute of Technology)
- P1-59 Development of Monitoring & Diagnostic System for Air-type Operating Controller of 170kV GIS
Young Min Kim, Soo Jin Lee, Min Soo Kim, Young Jun Choi (Hyosung Coporation)

Transformer

- P1-60 Common Information Model (CIM) Extension for Asset Management in Future Intelligent Grids
Gautam Bajracharya, Tomasz Koltunowicz, Dhiradj Djairam, Johan Smit (Delft University of Technology)
- P1-61 Effect of Corrosive Sulfur on Transformer Insulations
A. Abu-Siada, S. Islam (Curtin University of Technology)

- P1-62 Development of Evaluation Method for Combustion Properties of Insulation Fluids for Transformers
Osami Sugawa, Tomohiko Imamura (Tokyo University of Science), Kyoko Kamiya (Graduate School of Yokohama National University), Katsunori Miyagi, Akira Yamagishi (Japan AE Power Systems Corporation)
- P1-63 Comparative of Streamer Propagation Between Natural Esters Applications and Nutrition Esters under Lightning Impulse Voltage
Viet Hun Dang, Abderrahmane Beroual (Ecole Centrale De Lyon), Christophe Perrier (Areva T & D Power Transformers)
- P1-64 Assessing Oil Reclamation Effectiveness by Means of Turbidity and Spectro-Photometry Analysis
Janvier Sylvestre N'Cho, Abderrahmane Beroual (Ecole Centrale de Lyon), Issouf Fofana (Université du Québec à Chicoutimi), Thomas Aka-Ngnui (Ecole Centrale de Lyon), John Sabau (InsOil Canada Ltd.)
- P1-65 Transformer Life Management Program- Necessity and Importance
Bahie Shahbazi, Safar Farzalizade, Mohammadreza Shariati (Niroo Research Institute)
- P1-66 Preventive Maintenance of Oil-type Distribution Transformer at KMUTT
Choomphon Thongphudsee, Supakit Chotigo, Boonnua Pungsiri (King Mongkut's University of Technology Thonburi)
- P1-67 Influences of Filler Depending on Electrical Insulation Properties of Nano-composite
In-Bum Jeong, Joung-Sik Kim, Hyeon-Seok Han, Young-Sang Lee, Jong-Yong Lee (Kwangwoon University), Jong-Yeol Shin (Sahmyook University), Jin-Woong Hong (Kwangwoon University)
- P1-68 Optimization of Transformer Loading Based on Hot-spot Temperature using a Predictive Health Model
Gautam Bajracharya, Tomasz Koltunowicz, Rudy Negenborn, Dhiradj Djairam, Bart De Schutter, Johan Smit (Delft University of Technology)
- P1-69 Artificial Neural Network Approach to Classify Transformer Faults Based on DGA Diagnosis
M. Govindaraj, S. Saravanan, A.Venkatasam, B D Malpure (Crompton Greaves Ltd.)
- P1-70 Optimizing Transformer Conservator Design along with Insulation System Maintenance Efficiency
Harry Gumilang, Amanda Sri Lestari Putriyani (PT. PLN (Persero))
- P1-71 Application of BAM Network in Fault Diagnosis of Power Transformer
Liang Yongchun, Sun Xiaoyun, Liu Donghui (Hebei University of Science and Technology)
- P1-72 Study of Behaviour of Vegetable and Petroleum Based Dielectric Fluids during Thermal Ageing
Prosr P., Mentlik V., Polanský R., Pihera J., Trnka P. (University of West Bohemia)
- P1-73 Failure Statistics and Condition Assessment of Power Transformer for Condition-based Maintenance
Rattanakorn Phadungthin (King Mongkut's University of Technology North Bangkok), Cattareeya Suwanasri (Naresuan University), Thanapong Suwanasri (King Mongkut's University of Technology North Bangkok)
- P1-74 Practical Verification of DGA Automatic Diagnosis for Power Transformers with New VEV Method for Second Level of Diagnosis Resolution
Mladen Banovic (Zagreb, Croatia), Jean Sanchez, Mohamed Belmiloud (TSV)
- P1-75 An Efficient Integrated Approach to Power Transformer Condition Assessment
Ruijin Liao, Hanbo Zheng, Lijun Yang, Yiyi Zhang, Feilong Huang (Chongqing University)

- P1-76 Research on Aging Characteristics of Oil Impregnated Pressboard under Combined Thermal and Electrical Stresses
Shiqiang Wang, Guan-Jun Zhang, Jianlin Wei, Fengjiao Wu, Hao Xu (Xi'an Jiaotong University), Xiaowei Liu (Shaanxi Electric Power Research Institute)
- P1-77 Derivation of Aging Characteristics for Power Transformers by Artificial Intelligence Techniques
Tirinya Cheumchit, Armin Schnettler (RWTH Aachen University), Thanapong Suwanasri (The Sirindhorn International Thai-German Graduate School of Engineering)
- P1-78 Study on Time-domain Spectroscopy of Dielectric Response Applied in Oil-paper Insulation Thermal Aging
Jian-Lin Wei, Shi-Qiang Wang, Feng-Jiao Wu, Ming Dong, Guan-Jun Zhang (Xi'an Jiaotong University)
- P1-79 Study on On-line Dielectric Response of Oil-paper Insulation during Accelerated Aging Process at High Temperature
Jian-Lin Wei, Shi-Qiang Wang, Hao-Xu, Ming Dong, Guan-Jun Zhang (Xi'an Jiaotong University)
- P1-80 Optimal Accelerated Aging Tests for an Epoxy Resin Insulation System
Qikai Zhuang, Peter Morshuis, Xiaolin Chen, Dhiradj Djairam, Johan Smit (Delft University of Technology), Zhongrong Xu (Smit Transformatoren B.V.)
- P1-81 Transformer Insulation Oil Diagnosis Using RBOT
K. Baburao, A.Venkatasami, Anilkumar B Bhatia, Bhaskar D Malpure (Crompton Greaves Limited), Nalin Nanavati, Mangesh G. Bhurke (Raj Petro Specialties P Ltd.)
- P1-82 Dielectric Breakdown Characteristics on Silicon Oil
Martin Alfred Baur, Christian Hoffmann (Baur Prüf- Und Messtechnik GmbH)

Poster Session P2

Wednesday September 8, 18:00-20:00

Venue: Venue: Lobby (3rd & 4th Floors)

Arresters/Power capacitors/Others

- P2-1 Assessment of Zinc Oxide Varistor Degradation Using Return Voltage Measurements Method
Zulkurnain Abdul-malek, Zulkarnain A. Noorden (Universiti Teknologi Malaysia), Novizon (University of Andalas)
- P2-2 Design and Fabrication of Potential Rise Analysis System Using Electrolytic Tank
Hyoung-jun Gil, Dong-Woo Kim, Dong-Ook Kim, Ki-Yeon Lee, Hyun-Wook Moon, Hyang-Kon Kim (Korea Electrical Safety Corporation)
- P2-3 PD Classification at DC Voltage using a Fractal Analysis Method by Fiber Current Signals
Boxue Du, Zongle Ma, Xinxin Cheng, Yu Gao (Tianjin University), Li Wang (Tianjin University, Tianjin Electric Power Research Institute)
- P2-4 Space Charge and Electrical Breakdown Properties in PVC Exposed to High Temperature
Masakazu Miura (Shimane Prefectural Police Headquarters), Masumi Fukuma (Matsue National College of Technology), Satoru Kishida (Tottori University)

- P2-5 Development of Detector of Partial Discharges In Oil-filled Bushings
Tadashi Sato, Koichi Taketa, Masao Nakai (The Kansai Electric Power Co., Inc.)
- P2-6 Text Mining System for Analyzing Facility Maintenance Log
Osamu Segawa (Chubu Electric Power Co., Inc.), Kazuhiko Murakami, Masaki Mizuno, Munehiro Furusato (Chuden CTI Co., Ltd.)
- P2-7 Dielectric Loss Factor Measurement of High Voltage Capacitive Apparatus Based on Harmonic Analysis Method
Gao Qiang (Shanghai Jiao Tong University, Northeast Electric Power Research Institute), Zhang Junyang (Northeast Electric Power Research Institute), Sui yuqiu (Shanghai Jiao Tong University), Chang Jian (Northeast China Grid Company Limited), Sheng Gehao, Jiang Xiuchen (Shanghai Jiao Tong University)
- P2-8 Electromagnetic Energy Harvesting by Field Concentration in Intelligent Materials
Romeo Ciobanu, Radu Damian, Cristina Schreiner (Technical University Iasi)
- P2-9 Fuzzy Logic Combined with Impedance Measurements to Assess the SOC and SOH of Lithium-ion Cells
Ali Zenati, Philippe Desprez (SAFT), Hubert Razik (Université de Lyon), Stephane Rael (Laboratoire GREEN)

Outdoor insulation

- P2-10 Condition Assessment of 150 kV Aged Insulators
Egy Iskanto, Buyung Sofiarto Munir (PT PLN (persero) Research and Development)
- P2-11 Pattern Analysis of Discharge Characteristics for Hydrophobicity Evaluation of Polymer Insulator
Yong Liu, Boxue Du, Jie Li (Tianjin University)
- P2-12 The Hydrophobic Study of Silicone Rubber and EPDM Insulation under Dust with UV and Temperature
Apisit Chaisaengsukkul, Vijit Kinnares, Norasage Pattanadech (King Mongkut's Institute of Technology)
- P2-13 Monitoring Insulator Leakage Current in South of Brazil: Different Approaches for Different Requirements
Luiz Henrique Meyer, Graziano Cardoso, Carlos Oliboni, Hugo Almaguer (FURB - University of Blumenau), Fernando H Molina (Celesc)
- P2-14 Fault Detection and Localisation Method for Single-Wire-Earth-Return (SWER) Distribution Lines
K. L. Wong, Jiangxia Zhong (RMIT University)
- P2-15 Leakage Current Waveforms of Epoxy Resin Insulators Under Clean Fog and Computer Simulation using ATP/EMTP
Suwarno, David Parsaoran (Bandung Institute of Technology)

Overhead transmission lines

- P2-16 Fault Parameter Effects on the Energies of the Fault-Induced Transients
Flavio Bezerra Costa, Benemar Alencar Souza, Nubia Silva Dantas Brito (Federal University of Campina Grande)
- P2-17 Study and Development of the Fiber-optic Digital On-line Monitoring System for High-voltage Capacitive Equipments
LIU Yun-peng, HAN Guang (North China Electric Power University), WU Da-zhong (JDSU Corporation), LÜ Fang-cheng, WU Xiang-yuan (North China Electric Power University)

- P2-18 Research on Measurement System about Dynamic Loss of Transmission Line Based on GPS Synchronization
LIU Yun-peng, WU Xiang-yuan, LV Fang-cheng, HAN Guang, YOU Shao-hua, ZHU Lei (North China Electric Power University)
- P2-19 High Altitude Conductor Corona Characteristic Test System Research Based on Artificial Climate Laboratory
LIU Yun-peng, YOU Shao-hua (North China Electric Power University, State Grid Electric Power Research Institute), LÜ Fang-cheng (North China Electric Power University), WAN Qi-fa, WU Xiong, WAN Bao-quan, ZHANG Guang-zhou (State Grid Electric Power Research Institute), ZHU Lei (North China Electric Power University)
- P2-20 Comparison of Various Algorithms for the Determination of the Temperature of Overhead Line Conductors
Thomas Judendorfer, Stefan Jaufer, Stephan Pack, Michael Muhr (Graz University of Technology)
- P2-21 A FBG Sensor Applied in Ice Monitoring of Overhead Transmission Lines
MA Guo-ming, LI Cheng-rong, JIANG Jian, QUAN Jiang-tao, CHENG Yang-chun (North China Electric Power University)
- P2-22 A Novel Temperature Monitoring System of Overhead Transmission Lines Based on FBG Sensor
MA Guo-ming, LI Cheng-rong, JIANG Jian, QUAN Jiang-tao, CHENG Yang-chun (North China Electric Power University)
- P2-23 A Novel Sensing Device for Power System Equipment Condition Monitoring
John L. Lauletta (Exacter, Inc.), Stephen A. Sebo (The Ohio State University)
- P2-24 Development of Optimal Decision Approach for Conductor Replacement Based on Bayesian Inference
Masanori Isozaki, Takao Suzuki (Tokyo Electric Power Co., Inc.), Toshiyuki Ozaki (Kyushu Electric Engineering Consults Inc.)
- P2-25 New Method for Efficient Inspection to Find Damaged Part of Ground Wire by Lightning
Masahito Shimizu (Chubu Electric Power Co., Inc.), Masayoshi Arakane (Nichihoku Co., Ltd.), Hiroaki Saito (Nichiyu Giken Kogyo Co., Ltd.)
- P2-26 Robot for Inspection of Charged Transmission Lines
Kiyoshi Tamura, Tetsuharu Nishimura (Kansai Electric Power Co., Inc.), Shigeo Hirose, Edwardo F. Fukushima (Tokyo Institute of Technology), Paulo Debenest, Michele Guarnieri (Hibot Co., Inc.), Hiroshi Kubokawa, Narumi Iwama, Fuminori Shiga (J-Power Systems Co., Inc.), Tsuneo Oshima, Youichi Ichioka (Kanden Engineering Co., Inc.)

Rotating machines

- P2-27 Modelling of Hydroelectric Generator Failure Modes using Bayesian Network
Kim-Lan Zappellini, Mathieu Couplet (EDF R&D), Olivier Vacheron, Pierre-Jean Ferrasse, Serge Stella (EDF - Division Production Ingénierie Hydraulique)
- P2-28 On-line Monitoring of Motor and Generator Rotor Winding Turn Insulation Without Load Changing
Greg Stone, Mladen Sasic (Iris Power LP)
- P2-29 A Comparison among Different Conventional and Nanofilled Electrical Insulating Enamels
Francesco Guastavino, Alessandro Ratto, Stefano Squarcia, Eugenia Torello (University of Genova)

- P2-30 Tightness Measurement of the Bolted Joint with Electromechanical Transducer
Ling Shih-fu (Nanyang Technological University), Ivan Tanra (Research Student)
- P2-31 Considerations on the Long Term Reliability of On Line Partial Discharge Ceramic Sensor for Thermal Power Generators
Jong-Ho Sun, Young-Woo Youn, Dong-Ha Hwang, Dong-Sik Kang (Korea Electrotechnology Research Institute), Chan Nam-Gung, Myung-Ho Joo (Korea East-West Power Co., Ltd.)
- P2-32 A Diagnosis Algorithm for Low Voltage Induction Motor Using Stator Current and Vibration
Young-Woo Youn, Don-Ha Hwang, Dong-Sik Kang (Korea Electrotechnology Research Institute)
- P2-33 Development of On-line Partial Discharge Monitoring System for Insulation Diagnosis of Turbine Generator Stator Windings
Don-Ha Hwang (Korea Electrotechnology Research Institute), Young-Woo Youn, Jong-Ho Sun, Dong-Sik Kang (Korea Electrotechnology Research Institute), Chan Nam-Gung (Korea East-West Power Co., Ltd.)
- P2-34 Induction Motor Faults Detection by Electrical Input Impedance
Kar Foong Lian, Shih-fu Ling (Nanyang Technological University)
- P2-35 New Approach to Alignment of Biaxial Machinery with Face and Rim Method
Salar Khoobani, Mohsen Khandan (Islamic Azad University), Mahdi Heydari (Sharif University of Technology), Hamzeh Hosseini (Islamic Azad University)
- P2-36 Probabilistic Diagnosis of Short Circuit Fault in Stator Winding of Motor
Hiroyuki Fukui, Yukio Mizuno (Nagoya Institute of Technology), Hisahide Nakamura (TOENEC Corporation)
- P2-37 Verification of Thermal Treatment Influence on Thermosetting Epoxy Laminate Properties via Dynamic Mechanical Analysis
Radek Polanský, Pavel Prosr, Vaclav Mentlik, Josef Sušir (University of West Bohemia)
- P2-38 Bearing Fault Detection Improvement using Several Stator Current Measurements in Asynchronous Drives
Baptiste Trajin, Jérémie Régnier, Jean Faucher (Université de Toulouse)
- P2-39 A Method Based on Analytical Hierarchy Process for Generator Risk Assessment
Mohammad Zare Ernani, Asghar Akbari Azirani (K.N.T University of Technology)
- P2-40 Effective Machine Diagnosis with Implementing Various Condition Monitoring Techniques - A Case Study -
Vahid Rezaei (Tabriz Petrochemical Co.)
- P2-41 Machine Condition Management System for the Offshore Plants
Kanika Singh, B.S Ham, J-S Choi, J.H Hyun (KHAN Co., Ltd.)

Transformer

- P2-42 Field Application of Partial Discharge Detection Technology Based on UHF and Broadband Pulse Current Method
Wang Caixiong, Tang Zhiguo, Chang Wenzhi, Li Chengrong (North China Electric Power University)
- P2-43 Fault Diagnosis of OLTC through SFRA and Routine Tests
Kiran Kumar Munji, Shubangi Patil, A. Venkatasami (Crompton Greaves Ltd.)

- P2-44 Research on Characteristics of EMR of the High-Voltage Equipment During the Process of its Diagnostic
Nikolay Vladimirovich Kinsht, Natalia Nikolaevna Petrun'ko (Russian Academy of Science)
- P2-45 Effective Fault Diagnosis of the Actual Operating Transformer by FRA
Takahiro Sano, Yoshiharu Ogawa (Japan AE Power Systems Corporation), Takaaki Shimonosono, Tadayuki Wada (Chubu Electric Power Co., Inc.)
- P2-46 Localization of Partial Discharge in Model Transformer Tank using Acoustic Emission Technique
Narayanaperumal Arunachalam, A. Venkatasami, Anilkumar. B. Bhatia (Crompton Greaves Ltd.), B. Raja Pagalavan, K. Udayakumar (Anna University)
- P2-47 Magnetic Balance Test as Diagnostic Tool in Failure Investigation of Transformers
Bhaskar D. Malpure, K. Baburao, M. Govindaraj (Crompton Greaves Ltd.)
- P2-48 A Case Study on Condition Monitoring of Power Transformer
Wayan Ariastina, Ida Ayu Dwi Giriantari (Udayana University), Irvan Solin, O. Yolanda (Pt. Pln (persero) Transmission and Load Dispatch Center)
- P2-49 Condition Monitoring Method of Closed Switchboards by Frequency Spectrum Analysis
Dae-Won Park, Sun-Jae Kim, Sang-Gyu Cheon, Dong-Hoan Seo, Gyung-Suk Kil (Korea Maritime University)
- P2-50 Detecting Moisture in Transformer-oil Using Acoustic Signals of Partial Discharges
Giscard F. C. Veloso, Luiz Eduardo Borges Da Silva, Ismael Noronha, Germano Lambert Torres (Federal University at Itajuba)
- P2-51 Reproducibility of Dynamic Resistance Measurement Results of On-Load Tap Changers - Effect of Test Parameters
J.J. Erbrink, E. Gulski, J.J. Smit (Delft University of Technology), R. Leich (Liandon), P.P. Seitz, B. Quak (Seitz Instruments Ag)
- P2-52 Pattern Recognition of the Factors Affecting the Reproducibility of FRA Measurements in Power Transformers
Juan L. Velásquez Contreras (OMICRON Electronics GmbH), Miguel A. Sanz-Bobi (Comillas Pontifical University), Wojciech Koltunowicz, Alexander Kraetge (OMICRON Electronics GmbH), Maximilian Heindl (University of Stuttgart)
- P2-53 Identification of Transformer-specific Frequency Sub-bands as Basis for a Reliable and Automatic Assessment of FRA Results
Juan L. Velásquez Contreras (OMICRON Electronics GmbH), Daniel Kolb (University of Stuttgart), Miguel Angel Sanz-Bobi (Universidad Pontificia Comillas), Wojciech Koltunowicz (OMICRON Electronics GmbH)
- P2-54 On-site Diagnosis of Abnormality of Transformer Winding by Frequency Response Analysis
-Diagnosis Without Initial Data-
Satoru Miyazaki, Yoshinobu Mizutani (Central Research Institute of Electric Power Industry), Kazumichi Matsumoto, Shinichi Nakamura (Kyushu Electric Power Company Inc.)
- P2-55 Dielectric Tests on Power Transformers by means of Static Frequency Converters
Andreas Thiede, Thomas Steiner, Ralf Pietsch, Mario Jochim (Highvolt Pr)

- P2-56 Charge Behavior in Palm Fatty Acid Ester Oil (PFAE) / Pressboard Composite Insulation System under Electrification Flow
Hikaru Saito, Tsutomu Nara (Nagoya University), Katsumi Kato (Niihama National College of Technology), Hiroki Kojima (Nagoya University), Hongjie Zheng, Hidenobu Koide (Japan AE Power Systems Corporation), Hitoshi Okubo (Nagoya University)
- P2-57 A New Method of Winding Turn Determination for Windings of Power Transformers
Sebastian Schreiter, Peter Werle, Oleg Kouzmine (ABB)
- P2-58 Study on Characteristic Parameters of Air-gap Discharge in Transformer Oil-paper Insulation and its Development Properties
Weigen Chen, Xi Chen, Wei Chao, Jianfeng Yang (Chongqing University)
- P2-59 An Integrated Multi-agent Based Condition Monitoring System for Power Transformer Insulation Monitoring
Reza Shojaee, Asghar Akbari, Mehdi Allahbakhshi, M. Azizian Fard (K.N. Toosi University of Technology)
- P2-60 SFRA Analysis Using Transformer Equivalent Circuit Modeling Technique
Shubhangi S Patil, Athikkan Venkatasami (CG Global R&D Centre)
- P2-61 Partial Discharge, Electric Characteristics of Eco-friendly Outdoor Transformer using PD Sensor
Eui-Hwan Jung, Jae-Hun Yoon, Seong-Hun Cho, Kee Joe Lim (Chungbuk National University), Jong Hun Jeong, Pyung Jung Kim (Dongwoo Electric Corporation)
- P2-62 Experience of On-site Partial Discharge Measurement on EHV Power Transformer by UHF Method
Chang-Hsing Lee, Min-Yen Chiu, Chih-Hsien Huang (Chan-Ching Electric Technique Consulting Co.), Ming-Xuei Wu (Taiwan Power Research Institute), Shih-Hsiung Yen (Industrial Technology Research Institute)
- P2-63 Partial-discharge Source Location using an Entire-domain Search Method
Tee Tang (Queensland University of Technology), Jose Lopez-Roldan (Powerlink Queensland)
- P2-64 Partial Discharge Properties in Biodegradable Oil Impregnated Insulation
W.G. Ariastina (Udayana University), B.T Phung, T.R. Blackburn (The University of New South Wales)
- P2-65 Simulation and Replication Experiment for a Novel Sensor Used for Transformers PD UWB RF Location System
Chang Wenzhi, Tang Zhiguo, Li Chengrong (North China Electric Power University), Wang Hao (China Electric Power Research Institute), Zheng Shusheng (North China Electric Power University), Lu Ru (Shanghai Municipal Electric Power Company), Ma Guoming (North China Electric Power University)
- P2-66 Experimental Study on the Evolution Process of Partial Discharges on Oil-paper Insulation under DC Voltage
Wu Hao, Chengrong Li, Bo Yang (North China Electric Power University)
- P2-67 Improving Recognition of Internal Partial Discharges of an Epoxy-paper Insulation of Transformers
Xiaolin Chen, Peter Morshuis, Qikai Zhuang, Dhiradj Djairam (Delft University of Technology), Zhongrong Xu (Smit Transformatoren B.V.), Johan Smit (Delft University of Technology)

- P2-68 Multi-parameters Condition Assessment Based on Integrated Condition Monitoring System for Power Transformers
Xu Zhao, Yongpeng Meng, Yonghong Cheng, Kai Wu (Xi'an Jiaotong University), Hong Zhao, Jun Li (Qinghai Electric Power Corporation)
- P2-69 The Influence of Water Content in Oil on Partial Discharge Development Process Occurred in the Inter-turn of Transformer Windings
Yang Yuan, Li Chengrong, Zheng Zhong, Li Guangmao, Zhou You (North China Electric Power University)
- P2-70 Transformer Life Management By Condition-based Ranking
Sergey Zhivodernikov (Electrogridservice of Unified National Power System)
- P2-71 Accelerated Deterioration of High Voltage Bushings
William Malcolm Mcdermid, T. Black (Manitoba Hydro)
- P2-72 The Characteristics of the Impulse Input Module of LVI Test System
Chae-hwa Shon, Kwang-hwa Kim, Sang-hwa Yi, Heun-jin Lee, Dong-sik Kang (Korea Electrotechnology Research Institute)
- P2-73 Partial Discharge According to IEC 60270 vs. Real Broadband Digital Measurement
Pavel Trnka, Josef Pihera, Pavel Prosr, Martin Sirucek (University of West Bohemia)
- P2-74 Wireless On-line Monitoring System of Substation Based on ZigBee Technology
Tao Wang, Guangning Wu, Debin Wen, Peidong Du, Xin Wang (Southwest Jiaotong University)
- P2-75 Condition Monitoring & Diagnostics of Power Transformer Based on DGA and Electrical Tests
Bhaskar Dattatrey Malpure, Baburao - Keshawatkar, Venkatasami - Athikkan (Crompton Greaves Limited)
- P2-76 A Study on Multi-stress Monitoring System in Oil-filled Transformer using Optical Fiber Sensors
Myong-Hwan Kim, Tae-Sik Kong (Hoseo University), Jong-Kil Lee (Andong Nat'l University), Minho Song (Chunbuk Nat'l University), June-ho Lee (Hoseo University)
- P2-77 Measurement of Partial Discharge Phenomena in Liquid Nitrogen Considering Different Types of Sensors
Woo-ju Shin, Umer Amir Khan, Sang-Haw Lee, Ja-Yoon Koo, Bang-Wook Lee (Hanyang University)
- P2-78 Online Partial Discharge Detection on Power Apparatus Employing UWB Method
Zhong Zheng (North China Electric Power University), Lin Ruan (Hubei Electric Power Test & Research Institute), Shengyou Gao (Tsinghua University), Junfeng Gui (Beijing Jiaotong University)
- P2-79 Recent Progress and Future Perspective on Condition Monitoring of China Traction Supply Equipment in High-speed Railway
Guangning Wu, Peng Wang, Guoqiang Gao, Zhichao Ren (Southwest Jiaotong University)
- P2-80 An investigation on the characteristics of Self designed Chip Sensor employable for detecting the PD pulses occurring inside Gas Insulated Transformer
In-Jin Seo, Jae-Keun Song, Ja-Yoon Koo (Hanyang University)

Closing ceremony
Friday September 10, 15:40-
Venue: Grand Lecture Room