



Jicable'11

Programme of the Conference

Chairmen and Rapporteurs of the sessions are subject to confirmation

SESSION A.0

Opening Session

Monday June 20th, 2011 - 9:00 - 10:30

Room A

A.0.1 *The session will include the opening ceremony and official welcome addresses.*

Opening Lecture: See the Jicable's web site www.jicable.org/2011/

SESSION A.1

HV Installation techniques

Monday June 20th, 2011 - 11:00 - 12:30

Room A

Chairman : **Pierre ARGAUT** - Silec Cable (General Cable) / CIGRÉ ()

Rapporteur : **Yves MAUGAIN** - EDF / CIGRÉ (France)

A.1.1 *New technique to install power cables into ducts*

Willem GRIFFIOEN - Plumettaz SA, Rotterdam; The Netherlands

Patrice BLANCHET - Plumettaz SA, Bex; Switzerland

Gérard PLUMETTAZ - Plumettaz SA, Singapore; Singapore

A.1.2 *Transition technologies for HV cable systems*

Volker AUE, Dietmar MEURER - Nexans Deutschland GmbH, Hannover; Germany

A.1.3 *Oil filled cable leak location using PFT (Per-fluorocarbon tracing) - Non-intrusive oil filled cable leak location*

Mike FAIRHURST - National Grid, Warwick; United Kingdom

Patrick KEELAN - PFT Tech, New York, NY; United States

A.1.4 *First 220 kV city cable for retrofitting of steel pipe cables*

Anika BOSSE, Tobias WOLLSCHLÄGER, Volker WASCHK - nkt cables GmbH, Köln; Germany

A.1.5 *New repair method of a 380 kV fluid-filled cable, damaged by impact*

Georg SVEJDA, Johannes VAVRA - Wienstrom, Vienna; Austria

Manfred WANDA - Prysmian, Vienna; Austria

Nick CRANE - Prysmian, Bishopstoke; United Kingdom

A.1.6 *Improved installation methodologies for EHV cables in underground tunnels*

Per CHRISTENSEN, Jesper Lykke NIELSEN - nkt cables, Broendby; Denmark

Alwyn HANEKOM, David CHEALE - Balfour Beatty Utility Solutions Ltd, Dartford; United Kingdom

SESSION B.1

EMF: Electric and Magnetic Fields

Monday June 20th, 2011 - 11:00 - 12:30

Room B

Chairman : **Paolo MAIOLI** - Prysmian Cables and Systems (Italy)

Rapporteur : **Laetitia PASSOT** - RTE (France)

B.1.1 *Impact of EMF on cable ratings and cable systems*

Harry ORTON - OCEI, Vancouver, BC; Canada
Paolo MAIOLI - Prymian Cables and Systems, Milan; Italy
Tim BARNES - Transgrid, Sydney; Australia
Heinrich BRAKELMANN - University Duisburg-Essen, Duisburg; Germany
Jarle BREMNES - Nexans Norway AS, Halden; Norway
Sudhakar CHERUKUPALLI - BC Hydro, Vancouver, BC; Canada
François COCHET - Nexans, Neuchatel; Switzerland
Jean HOFFELMAN - Elia-Engineering, Brussels; Belgium
Frédéric LESUR - RTE-France, Paris; France
Julio LOPES - Inovatec Consultoria e Engenharia, Sao Paulo; Brazil
Josu ORELLA - IBERDROLA, Bilbao; Spain
Jacco SMIT - Liandon, Amsterdam; The Netherlands

B.1.2 *EMF conductor management of cable systems*

Frédéric LESUR - RTE, Paris; France

B.1.3 *SC-IES-Cables: Single-core cables with integrated electromagnetic shielding*

Heinrich BRAKELMANN, Jan BRUEGGMANN - University Duisburg-Essen, Duisburg; Germany

Volker WASCHK - nkt cables GmbH, Köln; Germany

B.1.4 *Shielding of the electromagnetic field generated by HV underground cable lines*

Paolo MAIOLI - Prysmian Cables & Systems, Milan; Italy

B.1.5 *Ampacity derating effects of magnetic field management techniques used with underground transmission cables*

John COOPER - Power Delivery Consultants, Tijeras, New Mexico; United States

David FUGATE - Electric Research & Management, Pittsburgh, Pennsylvania; United States

Tiebin ZHAO - Electric Power Research Institute, Charlotte, North Carolina; United States

B.1.6 *Magnetic mitigation of HV cable junction zone*

Aldo CANOVA - Dipartimento Ingegneria Elettrica, Politecnica di Torino, Turin; Italy

Luca GIACCONE - NoField srl - Incubatore di Imprese Politecnico di Torino, Turin; Italy

SESSION C.1

MV cable accessories

Monday June 20th, 2011 - 11:00 - 12:30

Room C

Chairman : **Francis KRÄHENBÜHL** - Nexans Deutschland GmbH (Germany)

Rapporteur : **Bertrand JARRY** - ERDF (France)

C.1.1 *15 year's experience of cold-shrinkable MV joints*

Stéphane TOGNALI, Gérard LENCOT - Prysmian Câbles et Systèmes France, Gron; France

C.1.2 *MV cable termination failure prevention: Online diagnostic method application at ERDF*

Thierry ESPILIT, Fabrice ZORZI - EDF R&D, Moret-sur-Loing; France

Roger TAMBRUN - ERDF Direction Réseau, Paris La Défense; France

C.1.3 *Connection to MV cable aluminium screen*

Christophe TOURCHER - EDF R&D, Moret-sur-Loing; France

Members of SYCABEL - SYCABEL, Paris; France

Roger TAMBRUN - ERDF, Paris La Défense; France

C.1.4 *Experience with joint failures in new "smart grid" MV cable circuits*

Jacco SMIT, Frank De VRIES - Liandon, Alkmaar; The Netherlands

Ger SEBREGTS - Liander, Arnhem; The Netherlands

C.1.5 *Impact of filled-strand conductor on connector temperature for medium voltage joints*

Thomas PARKER, Nigel R. HAMPTON - NEETRAC, Atlanta, GA; United States

C.1.6 *Service experience and laboratory testing of MV XLPE cable accessories*

Jan Tore BENJAMINSEN, Hallvard FAREMO, Sverre HVIDSTEN - SINTEF Energy Research, Trondheim; Norway

SESSION D.1

Economy and costs of cable systems

Monday June 20th, 2011 - 11:00 - 12:30

Room D

Chairman : **Mozart DE SIQUEIRA CAMPOS ARAÚJO** - Brennand Energia – Recife (Brazil)

Rapporteur : **Giao ROINEL** - RTE (France)

D.1.1 *Simulation of life cycle costing analysis to evaluate project of installation high voltage undersea cable 150 kV circuit III and IV Java-Bali*

Ngapuli SINISUKA - Bandung Institute of Technology (ITB), Bandung; Indonesia
Iqbal FELANI, Novrizal ERDIANSYAH - Electricity Utility Company (PLN), Jakarta; Indonesia

D.1.2 *Technical-economic analysis using aluminum instead of copper conductor for medium voltage cables and the practice in Zhejiang, China power grid*

XUAN YuLong, SHAO XueJian - Hangzhou Electric Power Bureau, Hangzhou City; China
JIANG Wendong - Zhejiang Provincial Electric Power Bureau, Hangzhou City; China

D.1.3 *Whole-life costs and environmental assessment of high voltage power cable systems*

Gary STEVENS, Ben PHILPOT, Janet THOMAS - GnoSys UK Ltd, Guildford; United Kingdom
Ankit GOWADIA, Mike FAIRHURST - National Grid, Warwick; United Kingdom

D.1.4 *Modern 3-core MV XLPE cables and their impact on TCO*

Håkan BRINGSSELL, Lars EFRAIMSSON, Thomas CARLQVIST - Ericsson AB, Falun; Sweden

D.1.5 *Economical design of cable conductors*

Frédéric LESUR, Victor LEJOUR - RTE, Paris; France

D.1.6 *Overall cost comparison between cable and overhead lines including the costs for repair of random failures*

Roberto BENATO - University of Padova, Padova; Italy
Domenico NAPOLITANO - Free Lance, Venezia; Italy

SESSION A.2

HVDC cables and accessories

Monday June 20th, 2011 - 14:30 - 16:00

Room A

Chairman : **Steve SWINGLER** - University of Southampton (UK)

Rapporteur : **Paul PENSÉRINI** - RTE - CNER (France)

A.2.1 *Specification for extruded HVDC land cable systems*

Rémi VATONNE, Nathalie BOUDINET, Jonathan BENETEAU, Pierre HONDAA, Frédéric LESUR - RTE, Paris; France
Gregorio DENCHE, José Manuel ARGUELLES ENJUANES - Red Eléctrica de España, S.A., Madrid; Spain

A.2.2 *Key parameters for extruded DC cable qualification*

Wilfried FRELIN, Philippe EGROT - EDF R&D, Moret-sur-Loing; France

- A.2.3** *Development of pre-molded accessories for HVDC extruded cable system*
SAKAI Yasuhiro, NIINOBE Hiroshi, HIRASAWA Takayuki - VISCAS Corporation, Ichihara, Chiba; Japan
- A.2.4** *Development of a 270 kV XLPE cable system for HVDC applications*
Mohamed MAMMERI, Marie Laure PAUPARDIN, Bernard POISSON - Silec Cable (General Cable), Montereau; France
- A.2.5** *Development of high performance polymeric materials for HVDC cables*
Andreas FARKAS, Carl-Olof OLSSON, Gustavo DOMINGUEZ - ABB AB, High Voltage Cables, Karlskrona; Sweden
Villgot ENGLUND, Per-Ola HAGSTRAND, Ulf. H. NILSSON - Borealis AB, Stenungsund; Sweden
- A.2.6** *Evolution of electric field, space charge concentration and distributions in an extruded HVDC cable*
Carl-Olof OLSSON - ABB AB, Corporate Research, Västerås; Sweden
Marc JEROENSE - ABB AB, High Voltage Cables, Karlskrona; Sweden

SESSION B.2

Environmental subjects - EMF and others

Monday June 20th, 2011 - 14:30 - 16:00

Room B

Chairman : **Harry E. ORTON** - Orton Consulting Ing (Canada)

Rapporteur : **François DESCHAMPS** - RTE - CNER (France)

- B.2.1** *Evaluation of the magnetic induction on metal pipelines by AC power cable circuits*
LIU Ying, MING LIU, CAO Xiaolong - Xi'an Jiaotong University, Xi'an, Shannxi; China
HAN Xiaopeng, ZHAO Rui - Beijing Electric Power Design Institute, Beijing; China
- B.2.2** *Cable systems in multi-purposes or shared structures*
Jey JEYAPALAN - Cigre' WG-B1.08, Member from; United States
Ray AWAD - Cigre' WG-B1.08, Member from; Canada
Ken BARBER, Colin PEACOCK - Cigre' WG-B1.08, Member from; Australia
Roberto BENATO - Cigre' WG-B1.08, Member from; Italy
Ian BUTT - Cigre' WG-B1.08, Member from; United Kingdom
Frank De WILD - Cigre' WG-B1.08, Member from; The Netherlands
GOTO Takeshi, SAKUMA Susumu, TAKAHASHI Yoshihisa - Cigre' WG-B1.08, Member from; Japan
KIM Jeong-tae - Cigre' WG-B1.08, Member from; Korea
Jordi MONTEYS - Cigre' WG-B1.08, Member from; Spain
Christophe MOREAU - Cigre' WG-B1.08, Member from; France
Kjell OBERGER - Cigre' WG-B1.08, Member from; Sweden
Rudolph WOSCHITZ - Cigre' WG-B1.08, Member from; Austria
Kok Thean YOOM - Cigre' WG-B1.08, Member from; Singapore
- B.2.3** *275 kV XLPE cable bridge crossings - Design and construction issues*
John McCORMACK, Nicola MOFFA, Raju UPADHYAYA - ElectraNet, Adelaide, South Australia; Australia
KIM Jeong hyun - Taihan Electric Co, Seoul; Korea
HEO Hoi-deok - LS Cable Ltd, Gumi, Gyeongbuk; Korea
Henry KENT - Energy Action, Sydney; Australia
- B.2.4** *Underground links across fields*
Alexandre IRLE, Jean ISOARD - RTE, Paris La Défense; France
- B.2.5** *Development of new recyclable insulation material for power cable*
KIM Jinman, HAN Bongsoo, KIM Youngjun - ILJIN Electric, Hwasung-si, Kyunggi-do; Korea
CHO Kyuchool, KU Kwanghoi, LEE Jaesun - SK Energy, Daejeon; Korea

KIM Dongmyung, JOUNG Jongman, KWON Taeho - KEPCO Research Institute, Daejeon; Korea

B.2.6 *New technology for recycling of plastics from cable waste*

Annika BOSS - Swerea IVF, Mölndal; Sweden

Jan-Ove BOSTRÖM, Per-Håkan NILSSON - Ineos ChlorVinyls, Stenungsund; Sweden

Andreas FARKAS - ABB AB, Karlskrona; Sweden

Alf ERIKSSON - Nexans IKO Sweden AB, Grimsås; Sweden

Erik RASMUSSEN - Stena Metall AB, Gothenburg; Sweden

Elin SVENNINGSSON - Draka Kabel Sverige AB, Nässjö; Sweden

Mattias DALESJÖ - Volvo 3P, Gothenburg; Sweden

Alf JOHANSSON - Volvo Car Corporation, Gothenburg; Sweden

SESSION C.2

LV and MV Cable Systems reliability

Monday June 20th, 2011 - 14:30 - 16:00

Room C

Chairman : **Jacint ROVIRA** - Grupo General Cables Sistemas SA (Spain)

Rapporteur : **Alain DOULET** - Former ERDF (France)

C.2.1 *Cable with optimized screen sheath complex*

Isabelle DENIZET, Cécile LELIEVRE, Bernard POISSON - Silec Cable (General Cable), Montereau; France

Rajae BENAKKI - General Cable, Manlleu, Barcelona; Spain

C.2.2 *The influence of manufacturing technique to power frequency breakdown characteristics of XLPE power cable*

YAN Mengkun, YANG Rongkai, MIAO Fugui - Quality Inspection and Test Center for Equipment of Electric Power, Wuhan, Hubei province; China

YANG Liming - State Grid Electric Power Research Institute, Wuhan, Hubei province; China

C.2.3 *Improving distribution system reliability*

Donald BAINBRIDGE - CitiPower & Powercor, Melbourne, Victoria; Australia

C.2.4 *An enhanced TR-XLPE insulation for long life power cables*

Paul CARONIA, Saurav SENGUPTA, Timothy PERSON - The Dow Chemical Company, Piscataway, NJ; United States

Steve CREE - Dow Europe GmbH, Horgen; Switzerland

C.2.5 *Temperature factor impact on the cable service life of XLPE cable during the installation of cable accessories*

LI Zhongqun, ZHAO Sen, WANG Wei - State Grid Electric Power Research Institute, Wuhan, Hubei province; China

LUO Jingsheng - Electric Power of Hangzhou, Hangzhou City; China

SESSION D.2

Maintenance (1)

Monday June 20th, 2011 - 14:30 - 16:00

Room D

Chairman : **Seung-Ik JEON** - LS Cable (Korea)

Rapporteur : **Sylvéric LAUMOND** - Silec Cable (General Cable) (France)

D.2.1 *Monitoring facilities for outage reduction of 380 kV power cables*

Sander MEIJER - TenneT TSO bv, Arnhem; The Netherlands

Johan J. SMIT - Delft University of Technology, Delft; The Netherlands

Rogier JONGEN - Seitz Instruments AG, Niederrohrdorf; Switzerland

Edward GULSKI - onsite.hv.solutions AG, Luzern; Switzerland

D.2.2 *Development of the electric potential method for HPFF cable systems*

NISHIKAWA Tsuyoshi, AIHARA Yasuhiko, TSUCHIYA Shinichi - Tokyo Electric Power Company, Chiyoda-ku, Tokyo; Japan

D.2.3 *Underground cables maintenance and repair*

Patrick DELCOURT, Joël BOUYER - RTE, Paris; France

D.2.4 *Development of a simple method for condition assessment of oil filled XLPE terminations*

Knut Brede LILAND, Sverre HVIDSTEN - SINTEF Energy Research, Trondheim; Norway
Geir BIRKENES, Frank MAUSETH - Department of Electric Power Engineering, NTNU, Trondheim; Norway
Eilert BJERKAN - Nortroll AS, Levanger; Norway

D.2.5 *REE's power cable maintenance program*

Rafael GARCÍA FERNÁNDEZ, Miguel Ángel PÉREZ LOUZAO - Red Eléctrica de España, S.A., Madrid; Spain

D.2.6 *Materials and test methods for power cables exposed to heavy operating conditions*

Christian CORNELISSEN - Nexans Deutschland, Moenchengladbach; Germany

SESSION A.3

HV Service experience

Monday June 20th, 2011 - 16:30 - 18:15

Room A

Chairman : **Kenneth Willis BARBER** - Nexans Asia-Pacific (Australia)

Rapporteur : **Fabien CHARLES** - Silec Cable (General Cable) (France)

A.3.1 *500 kV feed cable project for EXPO substation*

JIANG Yun - Shanghai Munciple Electrical Power Company, Shanghai; China
JIANG Xiaojuan, WANG Zhigang - Power Grid Inspection & Maintenance Company, SMEPC (Shanghai Munciple Electrical Power Company), Shanghai; China

A.3.2 *New 400 kV underground XLPE insulated cable system in UAE*

SHIMIZU Toshio, AOKI Toshiji, KURATA Tatsuo - J-Power Systems Corporation, Osaka; Japan
SUKEGAWA Takuya, IGI Tsuyoshi - J-Power Systems Corporation, Hitachi, Ibaraki; Japan
MASHIO Shoji - J-Power Systems Corporation, Tokyo; Japan

A.3.3 *Technical solution to completion of the world first 500 kV XLPE underground cable system in Shanghai*

WONG Hai Ngiing, ABE Shunsuke, YAMAMOTO Shoji, TORAI Yasuo - VISCAS Corporation, Tokyo; Japan
JIANG Yun, YANG Wen Wei, FANG Hao - Shanghai Munciple Electrical Power Company, Shanghai; China

A.3.4 *Prequalification test of 500 kV XLPE cable system in China*

XIA Rong, YANG Liming - State Grid Electric Power Research Institute, Wuhan, Hubei province; China
YANG Rongkai - Quality Inspection and Test Center for Equipment of Electric Power, Wuhan, Hubei province; China
JIN Guangqi, LV Gengming - Shenyang Furukawa Cable Corp., LTD., Shenyang, Liaoning; China
TAKAO Nakano - VISCAS Corporation, Tokyo; Japan

A.3.5 *Experience with developing and installing of a three core 150 kV power cable*

Jacco SMIT, Arie STEENIS, Alex GESCHIERE - Liandon, Alkmaar; The Netherlands
Volker WASCHK, Jens WOLCKEN, Hendrik REITER - nkt cables GmbH, Köln; Germany

A.3.6 *Development, qualification and experiences with 500 kV XLPE cable systems*

Johannes KAUMANN, Andreas WEINLEIN, Gero SCHROEDER, Volker STROOT -

Suedkabel GmbH, Mannheim; Germany

A.3.7 *Return of experience of 380 kV power cable failures*

Sander MEIJER - TenneT TSO bv, Arnhem; The Netherlands

Johan J. SMIT, Xiaolin CHEN - Delft University of Technology, Delft; The Netherlands

Wilfried FISCHER - 50Hertz Transmission GmbH, Berlin; Germany

Luigi COLLA - Terna S.p.A., Rome; Italy

SESSION A.3.bis

Presentation of Posters Session E.7.2

Monday June 20th, 2011 - 18:15 - 18:30

Room A

Chairman : **Kieron LEEBURN** - CBI-electric: African Cables Ltd (South Africa)

Rapporteur : **Raymond PETRUS** - Silec Cable (General Cable) (France)

A.3.bis.1 Presentation of the session by the chairman.

SESSION B.3

Challenges - Fire

Monday June 20th, 2011 - 16:30 - 18:15

Room B

Chairman : **Jean BECKER** - Nexans / SART Consult (Belgium)

Rapporteur : **Jean-Louis PONS** - Prysmian Câbles et Systèmes (France)

B.3.1 *Fire performance of HV and EHV XLPE insulated cables*

James ROBINSON, Wendy LOYENS - Borealis Polymers NV, Beringen; Belgium

Graeme ALEXANDER - Olex Cables, Victoria; Australia

B.3.2 *The role of the EU Construction Products Directive in supporting the application of improved low fire-hazard cables*

Jan SCHUTTEN - Europacable, Brussels; Belgium

B.3.3 *IEEE, API and IEC Standards update for testing, selection and installation of fire-rated circuit integrity cables*

Arturo MALDONADO - A&M Technology Group LLC, Naples, Florida; United States

B.3.4 *Study on the reaction to fire of medium voltage cables systems*

Neus GENERÓ, Jacint ROVIRA, Juan de Dios MARTÍNEZ - Grupo General Cable Sistemas S.A., Manlleu, Barcelona; Spain

Saturnino MARTÍN, Gonzalo MAÍZ - IBERDROLA, Bilbao; Spain

Gregorio DENCHE - Red Eléctrica de España, S.A., Madrid; Spain

B.3.5 *Fire performance cables under current overload conditions*

Ivan IVANOV, Graeme ALEXANDER - Olex, a Nexans company, Melbourne, Victoria; Australia

Richard HOSIER, Ken BARBER - Nexans Asia Pacific, Singapore; Singapore

B.3.6 *Fire equipment system in underground tunnels of KEPCO*

PAIK Nam-yeol, KIM Hong-iae - KEPCO, Seoul; Korea

B.3.7 *Assessment of the reaction to fire performance of electric cables under the EU construction products directive*

Terence JOURNEAUX - Prysmian Cables & Systems Limited, Eastleigh; United Kingdom

SESSION B.3.bis

Presentation of Posters Session E.7.1

Monday June 20th, 2011 - 18:15 - 18:30

Room B

Chairman : **John R. DENSLEY** - ArborLec Solutions Inc. (Canada)

Rapporteur : **Jérôme MATALLANA** - Nexans (France)

B.3.bis.1 Presentation of the session by the chairman.

SESSION C.3

Testing methods - Water Trees and Partial Discharges

Monday June 20th, 2011 - 16:30 - 18:15

Room C

Chairman : **Annika SMEDBERG** - Borealis AB (Sweden)

Rapporteur : **Bernard POISSON** - Silec Cable (General Cable) (France)

C.3.1 *Non-destructive water-tree detection in XLPE cables*

Willem BOONE - KEMA Nederland BV, Arnhem; The Netherlands

John DENSLEY - Arborlec Solutions, Mississauga; Canada

Sverre HVIDSTEN - SINTEF Energy Research, Trondheim; Norway

C.3.2 *Tree-retardant crosslinked (TRXLPE) reduced insulation wall accelerated cable life test (ACLT) results*

John T. SMITH III - General Cable Corporation, Scottsville, TX; United States

C.3.3 *3 kHz accelerated growth of water trees in medium voltage extruded cables*

Blandine HENNUY, Quentin DE CLERCK - Laborelec, Linkebeek; Belgium

Alain FRANÇOIS, Daniel TENRET - Ores, Louvain-La-Neuve; Belgium

Pieter LEEMANS, Joachim MARGINET - Eandis, Melle; Belgium

C.3.4 *A new approach to avoid negative superposition errors for PD measurements on lengths of extruded power cable*

Kay RETHMEIER, Alexander KRAETGE, Michael KRÜGER - Omicron, Klaus, Vorarlberg; Austria

C.3.5 *A new method of adopting distributed PD measurement in series resonance frequency voltage resistance test of high voltage cable*

ZHOU Lijun, JIANG Xiaojuan - Power Grid Inspection & Maintenance Company, SMEPC (Shanghai Municipality Electrical Power Company), Shanghai; China

C.3.6 *Measuring partial discharges with enhanced noise reduction by use of multi-band PD bandpass filters*

Kay RETHMEIER, Alexander KRAETGE, Michael KRÜGER - Omicron, Klaus, Vorarlberg; Austria

SESSION C.3.bis

Presentation of Posters Session E.5.1

Monday June 20th, 2011 - 18:15 - 18:30

Room C

Chairman : **François COCHET** - Nexans (Switzerland)

Rapporteur : **Serge COLOMBIER** - Prysmian Câbles et Systèmes (France)

C.3.bis.1 Presentation of the session by the chairman.

SESSION D.3

Maintenance (2)

Monday June 20th, 2011 - 16:30 - 18:15

Room D

Chairman : **Xiaolong CAO** - Univ. of Xian Jiaotong (China)

Rapporteur : **Christian RÉMY** - Prysmian Câbles et Systèmes (France)

D.3.1 *Application of artificial intelligence to the problem of selecting the appropriate diagnostic for cable systems*

Yamille DEL VALLE, Nigel HAMPTON - NEETRAC, Atlanta, GA; United States

- D.3.2** *Implementation of low and medium voltage cable aging management at nuclear power plants*
Gary TOMAN - Electric Power Research Institute, Charlotte, NC; United States
- D.3.3** *New technique for fault location in underground medium voltage cable*
Lionel REYNAUD, Daniel PINEAU - Institut de recherche d'Hydro-Québec (IREQ), Varennes, Québec; Canada
Jacques CÔTÉ - Hydro-Québec Distribution, Montréal, Québec; Canada
- D.3.4** *Implementation of modern methods of on-site testing and diagnosis of HV power cables*
Edward GULSKI - onsite.hv.solutions AG, Lucerna; Switzerland
Aleksandra RAKOWSKA, Krzysztof SIODLA - Poznan University of Technology, Poznan; Poland
Piotr CICHECKI - onsite.hv.solutions Benelux B.V., Delft; The Netherlands
Laurens D. POTS - BV Twentsche Kabelfabriek, Haaksbergen; The Netherlands
Johan J. SMIT - Delft University of Technology, Delft; The Netherlands
- D.3.5** *Hydro-Québec experience with infrared imaging for the maintenance of the underground medium voltage cable system*
Jacques CÔTÉ, André BELLEMARE - Hydro-Québec, Montréal, Québec; Canada
- D.3.6** *Investigation into the downtown Vancouver outage of 14 July 2008*
Khaled ABDOLALL, John VANDERMAAR - Powertech Labs Inc., Surre, BC; Canada
Dexter TARAMPI - BC Hydro, Vancouver, BC; Canada
- D.3.7** *Condition based maintenance of LV cable network of public lighting*
Zoltán Ádám TAMUS, Norbert FEKETE - Budapest University of Technology and Economics, Budapest; Hungary
Tamás SCHACHINGER, Róbert EGYED - GA Hungary Ltd., Törökbalint; Hungary

SESSION D.3.bis

Presentation of Posters Session E.5.2

Monday June 20th, 2011 - 18:15 - 18:30

Room D

Chairman : **Robert DONAGHY** - ESB International (Ireland)

Rapporteur : **Isabelle DENIZET** - Silec Cable (General Cable) (France)

D.3.bis.1 Presentation of the session by the chairman.

SESSION A.4

HV System design - EMF (Electric and Magnetic Fields)

Tuesday June 21st, 2011 - 9:00 - 10:30

Room A

Chairman : **Alain GILLE** - Elia Engineering (Belgium)

Rapporteur : **Pierre MIREBEAU** - Nexans France (France)

A.4.1 *Retrofitting of pipe-type cables*

Pierre HONDAA, Martial GUILLEMIN, Frédéric LESUR - RTE, Paris; France

A.4.2 *HVAC cables with ferromagnetic sheathings*

Jacco SMIT - Liandon, Alkmaar; The Netherlands

Heiner BRAKELMANN, Jorg STAMMEN, Jan BRUEGGMANN - University

Duisburg-Essen, Duisburg; Germany

Volker WASCHK - nkt cables GmbH, Köln; Germany

A.4.3 *Towards smart grid approach: Data acquisition from on-line monitoring of high voltage XLPE/oil-filled transition joints*

Luigi TESTA - Techimp, Bologna; Italy

Andrea CAVALLINI, Gian Carlo MONTANARI - University of Bologna, Bologna; Italy
Arie MAKOVOZ - ConEdison, New York, NY; United States

A.4.4 *The impact of transmission cable system construction and design on commissioning test options and results*

Steven CAMPBELL - General Cable / Silec Cable, Carrollton, Georgia; United States
Benjamin LANZ - IMCORP, Manchester, Connecticut; United States

A.4.5 *Feasibility study and cable system optimization in application of 500 kV XLPE cable in Edmonton region of Alberta*

Ali DARIANI - SNC LAVALIN T&D, Calgary Alberta; Canada

A.4.6 *Recent experiences with AC High voltage test equipment and PD commissioning testing of XLPE cable systems rated 69 kV and above*

Mark FENGER - Kinectrics Inc., Toronto, Ontario; Canada

SESSION B.4

Challenges - General

Tuesday June 21st, 2011 - 9:00 - 10:30

Room B

Chairman : **Marcello DEL BRENN**A - Prysmian Powerlink Srl (Italy)

Rapporteur : **Rémi VATONNE** - RTE (France)

B.4.1 *HVDC XLPE cable systems applicable for higher temperature and polarity reversal operation*

MURATA Yoshinao, ABE Kazutoshi, MATSUNAGA Osamu, ASAI Shinya, KATAKAI Shoshi - J-Power Systems Corporation, Hitachi, Ibaraki; Japan
MASHIO Shoji, SUIZU Makoto - J-Power Systems Corporation, Minato-ku, Tokyo; Japan

B.4.2 *Electric field measurements on XLPE/EPDM 2-layer insulation systems under DC stress*

Jérôme MATALLANA, Ludovic BOYER, Jean-François BRAME, Pierre MIREBEAU - Nexans France, Calais; France
Jérôme CASTELLON, Petru NOTINGHER, Serge AGNEL, Alain TOUREILLE - Institut d'Electronique du Sud - Université Montpellier 2, Montpellier; France

B.4.3 *Dielectric characterization of non-linear materials subjected to high DC and transient stresses*

Ludovic BOYER, Jérôme MATALLANA, Xavier MEERSSEMAN - Nexans France, Calais; France
Björn SONERUD - Nexans Norway AS, Halden; Norway
Arnaud ALLAIS - Nexans Research Centre, Lyon; France
Jérôme CASTELLON, Petru NOTINGHER - Institut d'Electronique du Sud - Université Montpellier 2, Montpellier; France

B.4.4 *Further developed fully insulated high voltage aerial cables*

Lars EFRAIMSSON, Bengt STRÖM, Thomas CARLQVIST - Ericsson AB, Falun; Sweden

B.4.5 *Introduction of mitigation technique to control magnetic field radiated by underground cables*

Kamal BEN HAMMADI, Fabien CHARLES, Bernard DHUICQ - Silec Cable (General Cable), Montereau; France

SESSION C.4

Testing methods - General

Tuesday June 21st, 2011 - 9:00 - 10:30

Room C

Chairman : **Nigel HAMPTON** - Georgia Tech NEETRAC (USA)

Rapporteur : **Emmanuel DIC** - Silec Cable (General Cable) (France)

- C.4.1 *On-site testing with compact AC test-system at the first 500 kV XLPE cable project in South America***
 Andreas WEINLEIN, Gero SCHROEDER - Suedkabel GmbH, Mannheim; Germany
 Harald GEYER - agea-kull ag, Derendingen; Switzerland
- C.4.2 *A methodology for the assessment of HVDC-XLPE cable insulation***
 Bertrand VISSOUVANADIN, Gilbert TEYSSÉDRE, Séverine LE ROY, Christian LAURENT
 - Laboratoire LAPLACE, Toulouse; France
 Isabelle DENIZET, Mohamed MAMMERI, Bernard POISSON - Silec Cable (General Cable), Montereau; France
- C.4.3 *Online-monitoring of the conductor temperature in MV power cable production using ultrasonic diagnosis***
 Gregor BRAMMER, Armin SCHNETTLER - Institute for high voltage technologies, Aachen; Germany
- C.4.4 *Modern methods of installation and diagnostic testing of distribution power cables***
 Edward GULSKI - onsite.hv.solutions AG, Luzern; Switzerland
 Frank De VRIES - Liandon, Alkmaar; The Netherlands
 Piotr CICHECKI - onsite.hv.solutions Benelux B.V., Werkendam; The Netherlands
 Johan J. SMIT - Delft University of Technology, Delft; The Netherlands
- C.4.5 *Challenges associated with the interpretation of dielectric loss data from power cable system measurements***
 Joshua PERKEL, Nigel HAMPTON - NEETRAC, Atlanta, GA; United States
 Jean Carlos HERNANDEZ - Universidad de Los Andes, Mérida, Mérida; Venezuela
 Jean-François DRAPEAU - Institut de recherche d'Hydro-Québec (IREQ), Montréal, Québec; Canada
 John DENSLEY - Arborlec Solutions, Toronto, Ontario; Canada
- C.4.6 *Next generation 200 kV VLF field testing and diagnosing of high voltage power cables***
 Mohammad Eyad AL-SIBAI - High Voltage Inc., Copake, New York; United States

SESSION D.4

Submarine - Cable performance

Tuesday June 21st, 2011 - 9:00 - 10:30

Room D

Chairman : **Marco MARELLI** - Prysmian (Italy)

Rapporteur : **Vincent VENTURINI** - RTE (France)

- D.4.1 *Collective versus individual screening of "wet design" ($Um \leq 36$ kV) power cores for multi-core cables***
 Jarle J BREMNES - Nexans Norway AS, Halden; Norway
 Hallvard FAREMO - SINTEF Energy Research, Trondheim; Norway
- D.4.2 *Analysis of transmission capacity of Zhoushan-mainland 110 kV submarine cables***
 WU Mingxiang - Zhejiang Provincial Electric Power Test and Research Institute, Hangzhou City; China
- D.4.3 *The Hawon-Anjwa project: Development and installation of the AC 154 kV XLPE 3 cores fiber optic embedded submarine power cable system***
 KIM Nam-yu, KIM Sung-yun, JEON Seung-ik, KWUN Young-guk, LEE Kwang-yeol - LS Cable Ltd, Gumi, Gyeongbuk; Korea
- D.4.4 *Water drop discharges and surface flashover at the solid - solid interface***
 Seyed Majid HASHEMINEZHAD, Erling ILDSTAD - Department of Electric Power Engineering, Norwegian Univ. of Technology and Science, Trondheim; Norway
- D.4.5 *The Oslo fjord project - The first project with long length 420 kV XLPE insulated***

submarine cables

Tor SKEIE, Jostein ELDERS, Alf Erik RØD - Nexans Norway AS, Halden; Norway
Bjørn SANDEN, Jørgen THON - Statnett, Oslo; Norway

D.4.6 *Qualification of a long 345 kV submarine XLPE cable system*

Johan KARLSTRAND, Danijela PALMGREN, Jörn ANTONISCHKI, Jonas JOHANSSON,
Björn ZETTERVALL - ABB, Karlskrona; Sweden

SESSION A.5

HV Accessories

Tuesday June 21st, 2011 - 11:00 - 12:30

Room A

Chairman : **Aleksandra RAKOWSKA** - Tu Poznan University of Technology (Poland)

Rapporteur : **François GAHUNGU** - Nexans (France)

A.5.1 *Cable accessories workmanship - US perspective*

Milan UZELAC, Steve WARTON - G&W Electric Company, Blue Island, IL; United States
Frank FRENTZAS - Exelon-Commonwealth Edison, Chicago, IL; United States

A.5.2 *Development of dry outdoor termination with silicone gel for self-standing*

MORI Anna, MARUICHI Shinji, NIINOBE Hiroshi, SUETSUGU Masahiro - VISCAS
Corporation, Ichihara, Chiba; Japan

A.5.3 *Dry terminations for high voltage cable systems*

Pascal STREIT - Nexans Switzerland, Penthalaz; Switzerland

A.5.4 *Remedial action and further quality assuring measures after a failure in a 400 kV GIS cable termination*

Frank JAKOB, Frank KOWALOWSKI, Claus KUHN, Wilfried FISCHER - 50Hertz
Transmission GmbH, Berlin; Germany
Sigurdur A. HANSEN - Suedkabel GmbH, Mannheim; Germany

A.5.5 *Long time operational experience with 400 kV XLPE power cable systems in Berlin*

Claus Georg HENNINGSEN, Wilfried FISCHER - 50Hertz Transmission GmbH, Berlin;
Germany

A.5.6 *Red Electrica's operating experience on 400 kV submarine and underground interconnection between Spain and Morocco*

Rafael GARCÍA FERNÁNDEZ, Miguel Ángel PÉREZ LOUZAO, Maria Dolores
LÓPEZ-MENCHERO CÓRDOBA - Red Eléctrica de España, S.A., Alcobendas; Spain

SESSION B.5

Long links & Gas Insulated Line (GIL)

Tuesday June 21st, 2011 - 11:00 - 12:30

Room B

Chairman : **Ray AWAD** - Hydro-Québec TransÉnergie (Canada)

Rapporteur : **Éric DORISON** - EDF R&D (France)

B.5.1 *Feasibility study for an 88 km underground cable system to supply 135 MVA to a desalination plant*

Mark STEMMLE - Nexans Deutschland GmbH, Hannover; Germany
Ken BARBER - Nexans Asia-Pacific, Singapore; Singapore

B.5.2 *Electrical studies performed to insert long AC cables in the French grid - First conclusions*

Sébastien DENNETIERE, Jonathan DUFOUR, Alexandre PARISOT, Jean-Pierre TAISNE,
Yannick VERNAY - RTE, Paris la Défense; France

B.5.3 *Contribution to localization of a fault on a long extruded submarine cable by LV Time*

Domain Reflectometry

Alain HERBRETEAU - OTC, Avignon; France

Bernard DHUICQ - Silec Cable (General Cable), Montereau; France

B.5.4 Challenges during planning, development and performance at a 275 kV XLPE cable project in the city of Liverpool

Sebastian EBERT, Horst MEMMER, Johannes KAUMANN, Andreas WEINLEIN, Gero SCHROEDER - Suedkabel GmbH, Mannheim; Germany

B.5.5 GIL for power transmission in specific site conditions

Alberto BERTINATO, Alain GIRODET - Alstom GRID, Villeurbanne; France

Mathieu BERNARD, Jean-Luc RAYON, Arnaud FICHEUX - Alstom GRID, Aix-Les-Bains; France

B.5.6 Pilot installation of a 380 kV directly buried gas insulated line (GIL)

Claus NEUMANN - Siemens AG, Erlangen; Germany

Stephan POEHLER - Amprion GmbH, Dortmund; Germany

SESSION C.5

Cables for the future - Nano dielectrics

Tuesday June 21st, 2011 - 11:00 - 12:30

Room C

Chairman : **Michel FRÉCHETTE** - Institut de recherche d'Hydro-Québec (Canada)

Rapporteur : **Jérôme CASTELLON** - Université de Montpellier (France)

C.5.1 Progress in the field of nanodielectrics : potentiality for HV cable applications

Michel F. FRÉCHETTE - Institut de recherche d'Hydro-Québec (IREQ), Varennes, Québec; Canada

Arnaud ALLAIS, Lazhar KEBBABI - Nexans;

Jérôme CASTELLON - IES; France

Hugues COUDERC, Christele VANGA - ÉTS/IREQ; Canada

C.5.2 Effect of conductive inorganic filler on space charge characteristics in XLPE as a HVDC insulating material

MIZUNO Takehiko, TAKAHASHI Tohru - VISCAS Corporation, Ichihara, Chiba; Japan

HARADA Hiroshi, HAYASHI Nobuya, TANAKA Yasuhiro - Tokyo City University,

Setagaya-ku, Tokyo; Japan

MAENO Takeshi - National Institute of Information and Communication Technology,

Koganei, Tokyo; Japan

C.5.3 Dielectric properties analysis of HDPE/SiO₂ nanodielectric materials for future cable insulation

Jérôme CASTELLON, Laurent BANET, Ioana PREDA, Serge AGNEL, Alain TOUREILLE - Institut d'Électronique du Sud - Université Montpellier 2, Montpellier; France

Éric DAVID, Abdelkhalek SAMI - École de Technologie Supérieure - Université du Québec, Québec, QC; Canada

Michel F. FRÉCHETTE - Institut de recherche d'Hydro-Québec (IREQ), Québec, QC; Canada

C.5.4 Voltage stabilizing additive assessment in polyethylene insulation

Timothy PERSON, Bret NEESE - The Dow Chemical Company, Piscataway, NJ; United States

C.5.5 Dielectric response of polyethylene loaded with nano particles of SiO₂

Éric DAVID, Abdelkhalek SAMI - École de Technologie Supérieure - Université du Québec, Québec, QC; Canada

Michel F. FRÉCHETTE - Hydro-Québec's Research Institute, Québec, QC; Canada

C.5.6 PEA assessment of XLPE and semiconductive compounds for HVDC application:

Measurements on plaques and mini-cables

Barry LENNON, Peter MORSHUIS - Delft University of Technology, Delft; The Netherlands
Timothy PERSON - The Dow Chemical Company, Piscataway, NJ; United States
Simon SUTTON - Dow Chemical Company Ltd, Staines; United Kingdom

SESSION E.5.1

Ageing, Maintenance, remaining life estimation and management (1)

Tuesday June 21st, 2011 - 11:00 - 12:30

Room E: Poster Session

Chairman : **François COCHET** - Nexans (Switzerland)

Rapporteur : **Serge COLOMBIER** - Prysmian Câbles et Systèmes (France)

E.5.1.1 *Effects of cross-linking method on insulation properties of cross-linked polyethylene*

ZHU Xiao-hui, ZHOU Feng-zheng - Tianjin Electrical Power Research Institute, Tianjin; China

DU Bo-xue, GAO Yu - School of Electrical Engineering and Automation, Tianjin University, Tianjin; China

E.5.1.2 *The effect of the peroxide ratio on crosslinking of cable materials*

Amin SHABANI, Emmanuel RICHAUD, Xavier COLIN - Arts et Métiers ParisTech, Paris; France

Gregory MARQUE, Carole MONCHY-LEROY - EDF R&D, Moret-sur-Loing; France

E.5.1.3 *Study of the stabilization of polyethylene and ethylene-propylene copolymers by a phenolic antioxidant*

Wissam BANNOUF, Emmanuel RICHAUD, Xavier COLIN - Arts et Métiers ParisTech, Paris; France

Grégory MARQUE, Carole MONCHY-LEROY - EDF R&D, Moret-sur-Loing; France

E.5.1.4 *Electric properties of XLPE model cables under AC and DC field at various temperatures*

Le WANG, Davide FABIANI, Gian Carlo MONTANARI, Fabrizio PALMIERI - University of Bologna, Bologna; Italy

Ulf. H. NILSSON - Borealis AB, Stenungsund; Sweden

E.5.1.5 *A new method for monitoring the antioxidant content in cable compounds during e-beam crosslinking*

Matthias MEYER, Inge DUEMLER - Nexans Research Center, Nuremberg; Germany

E.5.1.6 *Development of a diagnosis technique for assessing the properties of nuclear aged cables*

Domitille PITARD, Carole MONCHY-LEROY - EDF R&D, Moret-sur-Loing; France

Patrice THÉRON - EDF SEPTEN, Villeurbanne; France

E.5.1.7 *Rapid qualification of power cables materials*

Henryk HERMAN, Gary STEVENS, Janet THOMAS - GnoSys UK Ltd, Guildford; United Kingdom

E.5.1.8 *The effect of water ingress on dielectric properties of polyethylene cable insulation*

Simon BERNIER, Jean-François DRAPEAU - Institut de recherche d'Hydro-Québec (IREQ), Varennes, Québec; Canada

Éric DAVID - École de Technologie Supérieure - Université du Québec, Montréal, Québec; Canada

E.5.1.9 *Analysis of the resistivity loss of aged PVC cables and effects on their dielectric strength*

Pierre QUENNEHEN, Fabrice ZORZI, Thierry ESPILIT - EDF R&D, Moret-sur-Loing; France

Patrice THÉRON - EDF SEPTEN, Villeurbanne; France
Isabelle ROYAUD, Gérard SEYTRE - IMP/LMPB Université Lyon 1, Villeurbanne; France
Pascal RAIN - G2ELab, Grenoble; France

E.5.1.10 *Evaluation of field rejuvenated medium-voltage extruded cables*

Serge PÉLISSOU, Saleman ALIBHAY - Institut de recherche d'Hydro-Québec (IREQ),
Varenes, Québec; Canada

E.5.1.11 *Study on the maintenance policy based on RCM for power cable lines*

ZHAO Jiangkang, LUO Junhua - State Grid Electric Power Research Institute of China,
Wuhan, Hubei province; China
ZHANG Li - Power Grid Inspection & Maintenance Company, SMEPC (Shanghai Municipality
Electrical Power Company), Shanghai; China
LI Honglei - East China Electric Power Test & Research Institute Co., Ltd., Shanghai; China

E.5.1.12 *Underground cable description data management*

Patrick DELCOURT, Joël BOUYER - RTE, Paris; France

E.5.1.13 *Replacement strategies for customer minutes lost reduction in medium voltage cable networks*

Peter BUYS, Dik Van HOUWELINGEN, Edward COSTER - Stedin BV, Rotterdam; The
Netherlands

E.5.1.14 *Evaluation of insulating systems quality for HVDC power cable design toward space charge criterion*

Jérôme CASTELLON, Serge AGNEL, Alain TOUREILLE - Institut d'Électronique du Sud -
Université Montpellier 2, Montpellier; France
Arnaud ALLAIS, Lorrene BAYON - Nexans Research Center, Lyon; France

E.5.1.15 *On-line diagnostic system for SVL device on under-ground power cables*

MYUNG Keun-Sik, YOON Huyng-hee, KIM Heung joo - KEPCO, Seoul; Korea
JEONG Jae ki, JEONG Yun-kee, CHOI Yun-Jong - HanbitEDS Co. Ltd, DaeJeon; Korea

SESSION E.5.2

Ageing, Maintenance, remaining life estimation and management (2)

Tuesday June 21st, 2011 - 11:00 - 12:30

Room E: Poster Session

Chairman : **Robert DONAGHY** - ESB International (Ireland)

Rapporteur : **Isabelle DENIZET** - Silec Cable (General Cable) (France)

E.5.2.1 *Partial discharge (PD) automatic diagnosis tool for workers' safety in underground vaults*

François LÉONARD, Lionel REYNAUD, Jacques BHERER, Daniel PINEAU, Didier
MUSSARD, Sylvain POIRIER - Hydro-Québec, Québec, QC; Canada

E.5.2.2 *Temperature dependency of tan delta measurements at 0.1 Hz in XLPE medium voltage power cables*

Cuthbert NYAMUPANGEDENGU - University of the Witwatersrand, Johannesburg; South
Africa
Jerry WALKER - Walmet Technologies (Pty) Ltd, Vereeniging; South Africa

E.5.2.3 *Partial discharge pattern characteristics of 220 kV XLPE power cable joints with artificial defect*

ZHANG Xuejin, PAN Leilei - Shanxi Taiyuan Electric Power Supply Company, Taiyuan;
China
LUO Junhua, LI Wenjie, XIA Rong - State Grid Electric Power Research Institute, Wuhan,
Hubei province; China

E.5.2.4 *High frequency signal propagation in solid dielectric tape shielded power cables*

Jun (Jim) GUO, Rick STAGI - Utilx Corporation, Kent, WA; United States

- E.5.2.5 *Dependency of the dissipation factor on the test-voltage and the ageing status of MV PILC cables***
Ivana MLADENOVIC, Christian WEINDL - University of Erlangen-Nuremberg, Institute of Electrical Power Systems, Erlangen; Germany
- E.5.2.6 *A novel anti-interference method for partial discharge on-line measurement of HV power cables***
LI Wenjie, LUO Junhua, ZHAO Jiankang, XIA Rong, MENG Shaoxin - State Grid Electric Power Research Institute, Wuhan, Hubei province; China
ZHANG Xuejin, PAN Leilei - Shanxi Taiyuan Electric Power Supply Company, Taiyuan; China
- E.5.2.7 *Electrical tree and partial discharge degradation characteristics in XLPE cable insulation at high temperature***
FENG Yi - Beijing Electric Test and Research Institute, Beijing; China
CHEN Xiangrong, XU Yang, CAO Xiaolong - State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an; China
- E.5.2.8 *VLF tan-delta measurement on submarine cables in KEPCO***
LEE Jae-bong, JUNG Yeon-ha - KEPCO Research Institute, Daejeon; Korea
KIM Sung-min, KWON Tae-joon - KEPCO Head Office, Seoul; Korea
- E.5.2.9 *Partial discharge feature selection and evaluation using an enhanced recursive feature elimination (RFE) algorithm***
Jean Carlos HERNÁNDEZ, Jesús VELAZCO - Universidad de Los Andes, Mérida, Mérida; Venezuela
Joshua PERKER - Georgia Institute of Technology, Atlanta, GA; United States
- E.5.2.10 *Investigation of power frequency current transformer as partial discharge sensor in medium voltage cables***
Faisal PEER MOHAMED, Wah Hoon SIEW, John SORAGHUN, Scott STRACHAN - University of Strathclyde, Glasgow, Scotland; United Kingdom
- E.5.2.11 *A new lumped model for electrical treeing in XLPE cable insulations***
Abbas NAJAFIPOUR, Sayyed Mohammad SHAHRTASH - Iran University of Science and Technology (IUST), Tehran; Islamic Republic of Iran
- E.5.2.12 *PD signal compensation in cable terminals and classification for HV cable insulation assessment***
Mohsen BAKHSHI ASHTIANI, Mohammad SHAHRTASH - Iran University of Science and Technology (IUST), Tehran; Islamic Republic of Iran
- E.5.2.13 *Pulse signal propagation characteristics on the aged XLPE cable***
TAKAHASHI Toshihiro, KURAISHI Takashi, TAKAHASHI Tsuguhiro, SUZUKI Hiroshi, OKAMOTO Tatsuki - Central Research Institute of Electric Power Industry (CRIEPI), Yokosuka; Japan
- E.5.2.14 *Equipment for fast water trees resistance measurement of power cable insulations***
Sorin GRIGORESCU, Mihai Gabriel PLOPEANU, Petru NOTINGHER - Politehnica University of Bucharest, Bucharest; Romania
Cristina STANCU - INC DIE ICPE CA, Bucharest; Romania
- E.5.2.15 *VLF tan-delta criteria for XLPE insulated power cables in KEPCO***
LEE Jae-bong, JUNG Yeon-ha - KEPCO Research Institute, Daejeon; Korea
KIM Sung-min, KWON Tae-joon - KEPCO Head Office, Seoul; Korea
- E.5.2.16 *Experiences of diagnosis of HV cables with damped AC technique***
Zoltán Ádám TAMUS, Richárd CSELKÓ - Budapest University of Technology and Economics, Budapest; Hungary
Tamás SCHACHINGER, Róbert EGYED - GA Hungary Ltd., Törökbalint; Hungary

E.5.2.17 *Thermal step method - A non-destructive tool for lifetime estimation of treed cables insulation*

Cristina STANCU - INCIE ICPE CA, Bucharest; Romania

Petru NOTINGHER JR. - Universite Montpellier 2, Institut d'Electronique du Sud, Groupe Energie et Materiaux, Montpellier; French Southern Territories

Petru V. NOTINGHER, Mihai Gabriel PLOPEANU - Politehnica University of Bucharest, Bucharest; Romania

SESSION A.6

Submarine - Cable Systems

Tuesday June 21st, 2011 - 14:30 - 16:00

Room A

Chairman : **Anders H. GUSTAFSSON** - ABB AB - High Voltage Cables (Sweden)

Rapporteur : **David DUBOIS** - Nexans (France)

A.6.1 *Offshore wind parks grids connection projects in German North Sea*

Dongping ZHANG, Jochen JUNG, Thomas Jan LEBIODA - Tennet Offshore GmbH, Bayreuth; Germany

A.6.2 *High capacity HVDC subsea link for the UK*

Gareth PARKER - NGET, Warwick; United Kingdom

Paul CUNNINGHAM - Scottish Power, Glasgow, Scotland; United Kingdom

A.6.3 *Cables for deep water applications*

Marco BACCHINI, Marco MARELLI, Ambrogio ORINI - Prysmian PowerLink, Milan; Italy

A.6.4 *Application of XLPE submarine power cable for extra high voltage*

YANAGAWA Hiroyuki, MATSUNAGA Osamu, NAKAGAWA Toshihiro, ASAI Shinya - J-Power Systems Corporation, Hitachi, Ibaraki; Japan

KURATA Tatsuo - J-Power Systems Corporation, Osaka; Japan

MASHIO Shoji - J-Power Systems Corporation, Tokyo; Japan

A.6.5 *HVAC power transmission to the Gjøa platform*

Erik ERIKSSON, Marc JEROENSE, Magnus LARSSON-HOFFSTEIN, Claes SONESSON - ABB AB, High Voltage Cables, Karlskrona; Sweden

Knut-Aril FARNES, Rolf Ove RÅD, Karl Atle STENEVIK - Statoil AS, Stavanger; Norway

A.6.6 *Corrosion behaviour of submarine power cables in seawater environments*

Daniel ISUS, Juan de Dios MARTÍNEZ - General Cable Sistemas S.A., Manlleu, Barcelona; Spain

Virginia MADINA, Patricia SANTA COLOMA - TECNALIA, San Sebastián; Spain

SESSION B.6

Ageing and life expectancy (1)

Tuesday June 21st, 2011 - 14:30 - 16:00

Room B

Chairman : **John SMITH III** - General Cable Corporation (USA)

Rapporteur : **Frédéric PEURTON** - Nexans (France)

B.6.1 *Nuclear cables: Lifetime simulation and new approach for the study of polymer ageing*

Carole MONCHY-LEROY - EDF R&D, Moret-sur-Loing; France

Patrice THÉRON - EDF SEPTEN, Villeurbanne; France

B.6.2 *Condition assessment of transmission power cables*

Edward GULSKI - onsite.hv.solutions AG, Luzern; Switzerland

Piotr CICHECKI, Johan J. SMIT - Delft University of Technology, Delft; The Netherlands

Frank De VRIES - Liandon, Alkmaar; The Netherlands

Jan PELLIS - Stedin, Rotterdam; The Netherlands

Frank WESTER - TenneT, Arnhem; The Netherlands

B.6.3 *Development of external diagnosis for XLPE cable terminations*

SUYAMA Hiroshi, KOHAMA Takaharu, MORISHITA Yukinobu - Chubu Electric Power Co., Inc., Nagoya; Japan

WATANABE Masao, NAGAYAMA Tadanori - Tohoku Electric Power Co., Inc., Sendai; Japan

ABE Kazutoshi, SUZUKI Hiroshi - J-Power Systems Corporation, Hitachi, Ibaraki; Japan

B.6.4 *Aging performance of the new type outdoor termination using composite insulator*

IIDA Tomoo, SHIRO Tadahiko, TANIGOCHI Minoru - The Kansai Electric Power Co., Inc., Osaka; Japan

HOMMA Hiroya - Central Research Institute of Electric Power Industry (CRIEPI), Yokosuka; Japan

INOUE Yoshiyuki, HAGISAWA Kazuhisa - J-Power Systems Corporation, Tokyo; Japan

B.6.5 *Ageing UG systems: The SmartLife initiative*

Hallvard FAREMO - SINTEF Energy Research, Trondheim; Norway

Frank De WILD - KEMA, Arnhem; The Netherlands

Éric DORISON - Électricité de France, Moret-sur-Loing; France

B.6.6 *Improvement of an health index from ageing studies and field outcome*

Benoît PULUHEN, Éric DORISON, Yves BRUMENT - EDF R&D, Moret-sur-Loing; France

SESSION C.6

Cables for the future - Superconductivity

Tuesday June 21st, 2011 - 14:30 - 16:00

Room C

Chairman : **David LINDSAY** - EPRI (USA)

Rapporteur : **Jean-Maxime SAUGRAIN** - Nexans (France)

C.6.1 *Operation experience and further development of a high temperature superconducting power cable in the Long Island Power Authority grid*

Frank SCHMIDT, Rainer SOIKA - Nexans Deutschland GmbH, Hannover; Germany

James MAGUIRE, Jie YUAN - American Superconductor Corporation, Devens, MA; United States

Shawn BRATT - Air Liquide Advanced Technologies US LLC, Newark, NJ; United States

Tom WELSH - Long Island Power Authority, Hicksville; United States

C.6.2 *Development of 275 kV 3 kA HTS power cable*

MUKOYAMA Shinichi, YAGI Masashi, YONEMURA Tokui, NOMURA Tomoya, TENG Jun - Furukawa Electric, Ichihara, Chiba; Japan

OHKUMA Takeshi, MARUYAMA Osamu - Superconductivity Research Laboratory, Shinonome, Tokyo; Japan

AOKI Yuji - SWCC Showa Cable Systems, Sagamihara, Kanagawa; Japan

SAITOU Takashi - Fujikura, Sakura, Chiba; Japan

AMEMIYA Naoyuki - Kyoto University, Saikyo-ku, Kyoto; Japan

ISHIYAMA Atsushi - Waseda University, Shinjuku-ku, Tokyo; Japan

HAYAKAWA Naoyuki - Nagoya University, Chigusa-ku, Nagoya; Japan

C.6.3 *A breakthrough in the development of long-length HTS cables with integrated FCL property*

Irina MELNIK, Alex GESCHIERE - Alliander, Duiven; The Netherlands

Dag WILLÉN - nkt cables, Broendby; Denmark

Oleg CHEVTCHENKO - TU Delft, Delft; The Netherlands

C.6.4 *Superconducting HVDC power cables: Concepts and potential*

Rainer SOIKA, Erik MARZAHN, Frank SCHMIDT, Mark STEMMLE, Beate WEST - Nexans Deutschland GmbH, Hannover; Germany

Nicolas LALLOUET - Nexans France, Calais; France

C.6.5 HTS cable project in Yokohama

MASUDA Takato, YUMURA Hiroyasu, HIROTA Hirofumi - Sumitomo Electric Industries, Ltd., Osaka; Japan

HONJO Shoichi, HARA Tsukushi - Tokyo Electric Power Company, Yokohama; Japan

C.6.6 Novel grid concepts for urban area power supply

Mark STEMMLE - Nexans Deutschland GmbH, Hannover; Germany

Frank MERSCHERL - RWE Rheinland Westfalen Netz AG, Essen; Germany

Bernd R. OSWALD - Leibniz University of Hannover, Hannover; Germany

Mathias NOE - Karlsruhe Institute of Technology, Karlsruhe; Germany

SESSION D.6

LV and MV Cable Systems

Tuesday June 21st, 2011 - 14:30 - 16:00

Room D

Chairman : **Ngapuli Irmea SINISUKA** - ITB, Institut Teknologi Bandung (Indonesia)

Rapporteur : **Stéphane TOGNALI** - Prysmian Câbles et Systèmes (France)

D.6.1 Ultra low weight combined LV/FO cable for steep cable car pathway

Boris DARDEL, Marc BRESSENEL, Jean WITWTER, François COCHET - Nexans Suisse SA, Cortaillod; Switzerland

D.6.2 Influence of the additives on the water-treeing in XLPE insulated cables

Emeric LONG, Isabelle DENIZET, Bernard POISSON - Silec Cable (General Cable), Montereau; France

Elisenda CASALS - General Cable, Manlleu, Barcelona; Spain

D.6.3 Reliability evaluation of distribution cable diagnosis instruments with field test

PARK Noh-joon - Center for Advanced Electric Application, Wonkwang University, Iksan, Jeonbuk; Korea

PARK Dae-hee - Dept. of Electrical, Information & Communication Engineering, Wonkwang University, Iksan, Jeonbuk; Korea

D.6.4 The application of optical fiber composite low-voltage cable (OPLC) in smart grid of China

BAO Jicong, QIAO Xinxia, QIAN Ziming - Jiangsu Hengtong Power Cable Co., Ltd, Wujiang City, Jiangsu Province; China

D.6.5 Insulation state analysis and upgrading feasibility study of existing AC 10 kV XLPE distribution cables in Jiangsu grid of China

ZHANG Ziyang, FEI Yijun - Jiangsu Electric Power Research Institute Corporation LTD, Nanjing, Jiangsu; China

D.6.6 70 years of MV cables in Brazil: Reliability of cables, splices and potheads

Geraldo de ALMEIDA, Luiz ZANETTA - University of Sao Paulo - USP, Sao Paulo; Brazil

Ricardo BRANDÃO - AES Eletropaulo, Sao Paulo; Brazil

Walter PINHEIRO - Matrix Engenharia, Sao Paulo; Brazil

SESSION A.7

Submarine - Cable performance

Tuesday June 21st, 2011 - 16:30 - 18:15

Room A

Chairman : **Gunnar EVENSET** - Nexans Norway AS (Norway)

Rapporteur : **Nathalie BOUDINET** - RTE - CNER (France)

A.7.1 Submarine cable metallic sheath diagnostic

Harry ORTON - Orton International Consulting, Vancouver, BC; Canada

Avaral RAO - Powertech, Vancouver, BC; Canada
David KUNG - Powertech, Vancouver, BC; Canada
David HICKS - Newfoundland Hydro, St Johns, NFLD; Canada

A.7.2 *Influence of subsea conditions on the long term performance of AC XLPE cables*

Kenneth JOHANSSON, Anna DAVIDSSON - Draka Sverige AB, Nässjö; Sweden
Martin JAKOBSSON, Ulf. H. NILSSON, Jan-Ove BOSTRÖM - Borealis AB, Stenungsund;
Sweden
Hallvard FAREMO, Odd LILLEVIK - SINTEF Energy Research, Trondheim; Norway

A.7.3 *Armouring loss in three-core submarine XLPE cables*

Danijela PALMGREN, Johan KARLSTRAND, Gunnar HENNING - ABB, Karlskrona;
Sweden

A.7.4 *On the optimum burial depth of submarine power cables*

Thomas WORZYK, Johan KARLSTRAND - ABB, Karlskrona; Sweden

A.7.5 *Development and qualification of deepest water power umbilical*

Arild FIGENSCHOU, Jan Ole DUNSERUD - Aker Solutions, Oslo; Norway
Daniel ISUS - Grupo General Cable Sistemas S.A., Manlleu, Barcelona; Spain
Emmanuel BIC - Silec Cable (General Cable), Montereau; France

A.7.6 *Dielectric loss characterization of Hydro-Québec medium voltage (MV) submarine cables - Phase 1*

Jean-François DRAPEAU - Institut de recherche d'Hydro-Québec (IREQ), Varennes,
Québec; Canada
Bruno CANTIN - Hydro-Québec Distribution, Québec, QC; Canada
Nigel HAMPTON, Joshua PERKEL - NEETRAC, Atlanta, GA; United States

SESSION B.7

Ageing and life expectancy (2)

Tuesday June 21st., 2011 - 16:30 - 18:15

Room B

Chairman : **Ja Yoon KOO** - School of Elect. Eng. and Computer Science, Hanyang University (Korea)

Rapporteur : **Mohamed MAMMERI** - Silec Cable (General Cable) (France)

B.7.1 *US industry practices for MV cable fleet management*

David LINDSAY, Matthew OLEARCZYK - EPRI, Charlotte, North Carolina; United States

B.7.2 *Condition and life assessment of laminar dielectric cable systems through dissolved gas analysis based on field trials and extensive field data*

Nirmal SINGH, Sandeep SINGH - DTE Energy, Detroit, MI; United States
Rommy REYES, Pierre LINOIS - RTE, Nanterre, Paris; France
Steve ECKROAD - EPRI, Charlotte, NC; United States

B.7.3 *Condition monitoring of electrical cables using line resonance analysis (LIRA)*

Franco Paolo FANTONI - Wirescan AS, Halden; Norway

B.7.4 *Investigation of remained withstand voltage level and water tree degradation on aged and removed XLPE cable*

TAKAHASHI Toshihiro, KURAISHI Takashi, TAKAHASHI Tsuguhiko, SUZUKI Hiroshi, OKAMOTO Tatsuki - Central Research Institute of Electric Power Industry (CRIEPI), Yokosuka; Japan
TANAKA Sachika, SHIRO Tadahiko, MATSUYA Yuuji - The Kansai Electric Power Co., Inc., Osaka; Japan

B.7.5 *Evaluation results of PILC cables field aged 7 to 68 years*

Vitaliy YAROSLAVSKY, Carlos KATZ - Cable Technology Laboratories, New Brunswick, NJ; United States

David LINDSAY, Matthew OLEARCZYK - Electric Power Research Institute, Charlotte, NC; United States

B.7.6 *A study on the effect of performing VLF withstand tests on field aged degraded joints*

Jean-François DRAPEAU, Simon BERNIER - Institut de recherche d'Hydro-Québec (IREQ), Varennes, Québec; Canada

Jacques CÔTÉ - Hydro-Québec Distribution, Montréal, Québec; Canada

SESSION C.7

DTS: Distributed Temperature Sensing

Tuesday June 21st., 2011 - 16:30 - 18:15

Room C

Chairman : **Mohamed CHAABAN** - Institut de recherche d'Hydro-Québec (Canada)

Rapporteur : **Christophe MOREAU** - EDF R&D (France)

C.7.1 *Improvements of underground cable distribution systems in the area of Mexico City*

Edgar ROBLES - Instituto de Investigaciones Electricas, Cuernavaca, Morelos; Mexico

Victor SIERRA - ECSA, Huixquilucan, Estado de México; Mexico

C.7.2 *The research on temperature precision influenced by fiber loss based on distributed temperature system in cable monitoring*

LIU Qianqian, WANG Wei, ZHAO Sen - WHVRI Power Electric Science and Technology Stock, Wuhan, Hubei province; China

C.7.3 *Research on online temperature monitoring method for cable connector*

XU Jun, SU Wenqun - Power Grid Inspection & Maintenance Company, SMEPC (Shanghai Munciple Electrical Power Company), shanghai; China

C.7.4 *The necessity analysis of distributed fiber-optic temperature monitoring by Xiamen power cable alarm case study*

YAN Youxiang, SU Xueyuan - Xiamen power Ultility, Xiamen, Fujian; China

XIAO Chuanqiang - SINDIA, Beijing; China

C.7.5 *Low loss micro grid*

Lars EFRAIMSSON, Johan ÅHMAN, Thomas CARLQVIST - Ericsson AB, Falun; Sweden

C.7.6 *New characterization and design of power cables systems*

Josu ORELLA, Jesus BESTEIRO, Virginia MACIAS - IBERDROLA, Bilbao; Spain

SESSION E.7.1

Cable Systems and Testing

Tuesday June 21st., 2011 - 16:30 - 18:15

Room E: Poster Session

Chairman : **John R. DENSLEY** - ArborLec Solutions Inc. (Canada)

Rapporteur : **Jérôme MATALLANA** - Nexans (France)

E.7.1.1 *The application of the Y-branch joints in TEPCO*

WATANABE Kensuke, AIHARA Yasuhiko, TSUCHIYA Shinichi - Tokyo Electric Power Company, Chiyoda-ku, Tokyo; Japan

E.7.1.2 *Environmentally sound lead-free insulation material for medium voltage energy cables*

Amalendu SARKAR, John T. SMITH, III - General Cable Corporation, Indianapolis, Indiana; United States

E.7.1.3 *Distribution of peroxide by-products along degassed XLPE HV cables*

Christian ANDERSSON - Ericsson AB, Falun; Sweden

Martin JAKOBSSON, Annika SMEDBERG, Jan-Ove BOSTRÖM - Borealis AB,

Stenungsund; Sweden

- E.7.1.4 *XLPE for medium and high voltage cables insulation: Determination of organic peroxide's decomposition products by the most suitable analysis***
Alfredo DEFRANCISCI, Sandra GRIMALDI, Edwin-Jeffrey COURTIAL - ARKEMA Centre de Recherche Rhône-Alpes, Pierre-Bénite; France
- E.7.1.5 *Prototype for detection of delaminations in the sheath system of high voltage power cables using ultrasonic diagnosis***
Gregor BRAMMER, Armin SCHNETTLER - Institute for high voltage technologies, Aachen; Germany
- E.7.1.6 *Photoacoustics: An approach for online process control of degassing XLPE insulated high voltage cables***
Hans BETTERMANN, Thomas GRETHE - Heinrich-Heine-university of Duesseldorf, Duesseldorf; Germany
Anika BOSSE, Volker WASCHK - nkt cables GmbH, Köln; Germany
- E.7.1.7 *The research on XLPE cable insulation based on ground current method on-line monitoring technique***
GU yonggang, ZHONG Pengjiao - WHVRI Power Electric Science and Technology Stock, Wuhan, Hubei province; China
WANG Wei - State Grid Electric Power Research Institute, Wuhan, Hubei province; China
- E.7.1.8 *A versatile system for electrical treeing tests under AC and DC stress using wire electrodes***
Anette JOHANSSON, Stanislaw GUBANSKI, Markus JARVID, Mats ANDERSSON - Chalmers University of Technology, Gothenburg; Sweden
Björn SONERUD - Nexans Norway AS, Halden; Norway
Villgot ENGLUND - Borealis AB, Stenungsund; Sweden
Andreas FARKAS - ABB AB, Karlskrona; Sweden
- E.7.1.9 *Experimental study on detection equivalence of partial discharge at damped AC voltages and 50 Hz AC voltages in 110 kV XLPE power cables***
XIA Rong, ZHAO Jiankang - State Grid Electric Power Research Institute, Wuhan, Hubei province; China
Edward GULSKI - Delft University of Technology, Delft; The Netherlands
- E.7.1.10 *Partial discharge test and disassembly analyze of cable termination in Huanghoudian, Beijing***
ZHAO Yu, LI Huachun, HUANG Heming, XUE Qiang - Power Cable Company of Beijing Electric Power Corporation, Beijing; China
JIANG Xiaoying - BeiJing Electric Power Cable Company, Beijing; China
- E.7.1.11 *Power frequency magnetic field test and analyse of HV cables in tunnel***
LI Huachun, WANG Li, LIU Hao - BeiJing Electric Power Cable Company, Beijing; China
GUO Jianfu, ZHANG Wenxin - BeiJing Electric Power Cable Company, Beijing; China
- E.7.1.12 *Negative k-factor setting for power cables explained via sequence impedance measurements***
Wernich DE VILLIERS, Ulrich KLAPPER - Omicron, Klaus, Vorarlberg; Austria
- E.7.1.13 *Various cable terminal defect types and environmental factors impact on the results of PD test***
TU Na, WANG Wei - WHVRI Power Electric Science and Technology Stock, Wuhan, Hubei province; China
- E.7.1.14 *Frequency characteristics of partial discharges in MV extruded cables using non-conventional sensors***
LEE Young-jo, KIM Jong-yeol, SEO In-jin, KOO Ja-yoon - Hanyang University, Ansan,

Gyeong-Gi; Korea

JEONG Jae-cheol, KIM Jeong-tae - Daejin University, Phochon, Gyeong-Gi; Korea

E.7.1.15 *PD monitoring system of HV cable*

Miguel Ángel SÁNCHEZ URÁN, Fernando GARNACHO VECINO, Javier ORTEGO, Jorge MORENO, Fernando ÁLVAREZ, Oscar PERPIÑAN - Polytechnik University of Madrid, Madrid; Spain

Julio GONZALO GARCÍA, José Luis VALLEJO DIEZ - GasNatural Fenosa, Madrid; Spain

E.7.1.16 *Using after installation commissioning tests to assure power cable systems meet manufacturers' standards*

Stefaan JESPERS - Cegelec, Brussels; Belgium

Massimo VANOSI - Foster Wheeler Italiana, Corsico, Milan; Italy

Marco GREEN - IMCORP, Rendsburg; Germany

Benjamin LANZ - IMCORP, Manchester, Connecticut; United States

SESSION E.7.2

HV and EHV Cable Systems and Design

Tuesday June 21st., 2011 - 16:30 - 18:15

Room E: Poster Session

Chairman : **Kieron LEEBURN** - CBI-electric: African Cables Ltd (South Africa)

Rapporteur : **Raymond PETRUS** - Silec Cable (General Cable) (France)

E.7.2.1 *Silicone technology for reliable performance of joints and terminations for high voltage polymer power cables*

Ruben VOGELSANG, Hansjörg GRAMESPACHER - Brugg Cables, Brugg; Switzerland

Hans-Jörg WINTER, Martin GRUNWALD - Wacker Chemie AG, Brughausen; Germany

E.7.2.2 *Improving surface smoothness of semi conductive shields by blending ethylene copolymers*

Laurent GERVAT, Sébastien QUINEBECHE - ARKEMA, Serquigny; France

Oliver HISSMANN - OCS, Witten; Germany

E.7.2.3 *Influence of voids within electric fields in HVDC cables*

Sebastián GUTIERREZ, Sancho IÑAKI, Luis FONTAN, Jose MALUMBRES - CEIT and Tecnun (University of Navarra), San Sebastián, Gipuzkoa; Spain

E.7.2.4 *Investigation of the life curve for high voltage cable insulation*

Mikhail Y. SHUVALOV, Vladimir L. OVSIENKO - Russian Cable Scientific Research and Development Institute (VNIKIP), Moscow; Russia

E.7.2.5 *Selection research of protection earthing set-up of HV cable*

ZHOU Li, ZHOU Zhicheng - Jiangsu Electric Power Research Institute Corporation LTD, Nanjing, Jiangsu; China

Ji Wenlu - Nanjing Power Supply Company, Nanjing, Jiangsu; China

E.7.2.6 *The investigation and application of multi-state monitoring system to high voltage cables and tunnels*

ZHOU Zuochun, ZHANG Yanyan - Beijing Electric Test and Research Institute, Beijing; China

CONG Guang - BeiJing Electric Power Cable Company, Beijing; China

WANG Li, XUE Qiang, LI Huachun - Power Cable Company of Beijing Electric Power Corporation, Beijing; China

ZHANG Wenxin - Beijing Power Engineering Company, Beijing; China

E.7.2.7 *AC withstand voltage test of 345 kV cable system*

KIM Jae-seung, MIN Byeong-wook, KIM Tai-young - KEPCO, Seoul; Korea

E.7.2.8 *Voltage stabilizers for XLPE cable insulation*

Thomas HJERTBERG, Villgot ENGLUND - Borealis AB, Stenungsund; Sweden

- E.7.2.9 *Development and construction of 345 kV Power-Optical Fiber Composite XLPE 2500 mm² with prefabricated joints***
 YOON Hyung-hee, PAIK Nam-yeol, LEE Koan-seong, KIM Soo-hwan, OH Jong-ok, LEE Seung-hyun - Korea Electric Power Corporation (KEPCO), Seoul; Korea
- E.7.2.10 *Study and application of cable network operation monitoring system in Beijing***
 WANG Li, LI Huachun, XUE Qiang - BeiJing Electric Power Cable Company, Beijing; China
 ZHOU Zuochun, CONG Guang - BeiJing Electric Power Cable Company, Beijing; China
- E.7.2.11 *High temperature silicone elastomers for rolling stock cables***
 Bernard DALBE - Nexans Research Center, Lyon; France
- E.7.2.12 *Electrical, thermal and thermo-mechanical design of MV XLPE cables***
 Rohini BHATTACHARYYA - Dubai Cable Company Pvt. Ltd. (Ducab), Dubai; UAE
- E.7.2.13 *Study of 500 kV cable terminal insulation structure***
 WANG Wei, ZHAO Sen, LI Zhongqun - State Grid Electric Power Research Institute, Wuhan, Hubei province; China
 WANG Xixing - WHVRI Power Electric Science and Technology Stock, Wuhan, Hubei province; China
- E.7.2.14 *Multiconductor cell analysis of shunt compensated cable lines***
 Roberto BENATO - University of Padova, Padova; Italy
- E.7.2.15 *Optimal design for power cable metal sheath voltage compensation device***
 WANG Guangming, ZHANG Xing, WANF Donghai, WANG Chunling - Nanjing Power Supply Company, Nanjing, Jiangsu; China
 MA Hongzhong - HoHai University, Nanjing, Jiangsu; China
- E.7.2.16 *Sequence impedance computation by means of multiconductor method***
 Roberto BENATO, Leandro CACIOLLI, Ernesto ZACCONE - Prysmian Powerlink, Milan; Italy
- E.7.2.17 *Implementation of cable models for studies of compatibility of electric components in wind farms***
 Andrzej HOLDYK, Joachim HOLBOELL - Technical University of Denmark, Department of Electrical Engineering, Kongens Lyngby; Denmark
- E.7.2.18 *Performance tests on large conductors connectors***
 François GAHUNGU, Pierre MIREBEAU - Nexans, Calais; France
 Pascal STREIT - Nexans, Cossonay; Switzerland
- E.7.2.19 *Performance analysis of optical fiber composite low-voltage cable***
 ZHANG Ye, CHEN xi, ZHAO daping, QI Liyan, HOU Jiyong, LIU Hao, WANG Peng, AN Huirong, WANG Shuling, JIA Meijian, XU Gaoxiong, FENG Xuebin - China Electric Power Research Institute, Beijing, Haidian; China
- E.7.2.20 *EMF mitigation using steel pipes : Effect on cable thermal rating***
 Thierry BOUCHER, Éric DORISON - EDF R&D, Moret-sur-Loing; France
- E.7.2.21 *P-Laser: 10.000 km of installed cables based on a worldwide new technology***
 Sergio BELLI, Gabriele PEREGO, Luigi CAIMI, Alberto BAREGGI, Vincenzo CRISCI, Giovanni POZZATI, Stefano FRANCHI, Marco ALBERTINI, Fabrizio DONAZZI, Ernesto ZACCONE, Agusti VALLS - Prysmian S.p.A., Milan; Italy

SESSION A.8

Testing methods - Factory and after laying tests

Wednesday June 22nd, 2011 - 9:00 - 10:30

Room A

Chairman : **Dirk RITTINGHAUS** - Energycableconsult (Germany)

Rapporteur : **Bernard DHUICQ** - Silec Cable (General Cable) (France)

A.8.1 *A measuring system of conductor AC and DC resistance*

Karl-Erik RYDLER - SP Technical Research Institute of Sweden, Boras; Sweden
Mats SJOBERG, Jorgen SVAHN - ABB AB, Karlskrona; Sweden

A.8.2 *Advanced measurement of AC resistance on skin-effect reduced large conductor power cables*

Gero SCHROEDER, Johannes KAUMANN - Suedkabel GmbH, Mannheim; Germany
Ronald PLATH - Ing.-Büro HPS Berlin, Berlin; Germany

A.8.3 *New generation of on-site testing technology for transmission power cables*

Rogier JONGEN, Paul SEITZ, Ben QUAK - Seitz Instruments AG, Niederrohrdorf; Switzerland
Frank De VRIES - Liandon BV, Alkmaar; The Netherlands
Piotr CICHECKI - Delft University of Technology, Delft; The Netherlands

A.8.4 *A new approach for testing long HV and UHV cables*

Peter MOHAUPT, Tobias MEHL - Mohaupt High Voltage GmbH, Mieders; Austria

A.8.5 *Alternatives for HVAC testing of long HV cables in the factory and on-site*

Frank SCHREITER, Stefan SCHIERIG, Peter COORS - HIGHVOLT Prüftechnik Dresden GmbH, Dresden, Saxony; Germany

A.8.6 *Effectiveness of variable frequency resonant method for after-laying test on high voltage extruded cable*

ZHAO Jiankang, OUYANG Benhong, RAO Wenbin, LI Wenjie, XIA Rong - State Grid Electric Power Research Institute, Wuhan, Hubei province; China

SESSION B.8

Partial discharges and diagnostics (1)

Wednesday June 22nd, 2011 - 9:00 - 10:30

Room B

Chairman : **Ronald PLATH** - Ing.-Büro HPS (Germany)

Rapporteur : **Minh Nguyen TUAN** - EDF R&D (France)

B.8.1 *Evaluation of PD measurements on MV cable systems by means of a web database*

Frank PETZOLD - SebaKMT GmbH, Baunach; Germany
Steffen BÖTTCHER - FSG GmbH, Freital; Germany

B.8.2 *Intelligent DTS and PD monitoring system for underground distribution network*

KIM Juyong, CHO Jintae, SONG Ilkeun, LEE Jae-bong - KEPCO, Daejeon; Korea
CHOI Taesik - LS Cable Ltd, Anyang; Korea

B.8.3 *Comparison of different methodologies to assess the lifetime of cable*

Jean Christophe GARD, Karine BIC, Bernard POISSON - Silec Cable (General Cable), Montereau; France
Francisco ESPINOSA - General Cable, Manlleu, Barcelona; Spain

B.8.4 *Optical PD detection in stress cones of HV cable accessories*

Markus HABEL, Klaus VATERRODT, Gerd HEIDMANN - IPH - Institut "Prueffeld fuer elektrische Hochleistungstechnik" GmbH, Berlin; Germany
Wolfgang HABEL - Bundesanstalt fuer Materialforschung und -pruefung, Berlin; Germany
Ruben VOGELSANG, Werner WEISSENBERG, Oldrich SEKULA - Brugg Cables, Brugg; Switzerland
Daniel PEPPER - Beuth Hochschule fuer Technik, Berlin; Germany
Ronald PLATH - HPS Berlin, Berlin; Germany
Harald EMANUEL - Omicron, Klaus, Vorarlberg; Austria

B.8.5 *PD monitoring of 132 kV XLPE cable outdoor terminations: Practical experience*

Valentinas DUBICKAS, Andreas DERNFALK - STRI AB, Ludvika; Sweden

B.8.6 *Critical review of three capacitor model for PD estimation in micro-voids of polymer insulated cables*

Luigi TESTA - Techimp, Bologna; Italy

Andrea CAVALLINI, Gian Carlo MONTANARI - University of Bologna, Bologna; Italy

SESSION C.8

Cable rating - General

Wednesday June 22nd, 2011 - 9:00 - 10:30

Room C

Chairman : **Robert ROSEVEAR** - Southampton Dielectric Consultant Ltd. (UK)

Rapporteur : **Frédéric LESUR** - RTE (France)

C.8.1 *Factors affecting the optimal cable placement in duct banks or casings for best ampacity or power*

Wael MOUTASSEM - University of Toronto, Toronto, Ontario; Canada

George ANDERS - Kinectrics Inc., Toronto, Ontario; Canada

C.8.2 *Finite element analysis of SIWO-KUL (trade mark) cables*

Sandrine FRANÇOIS - Nexans Research Center, Lyon; France

François COCHET - Nexans Suisse SA, Cortaillod; Switzerland

Bruno WEIDER - Nexans Schweiz AG, Breitenbach; Switzerland

C.8.3 *Current rating of cables installed in deep or ventilated tunnels*

Éric DORISON - Électricité de France, Moret-sur-Loing; France

George ANDERS - Kinectrics Inc., Toronto, Ontario; Canada

C.8.4 *Reduction in current carrying capacity due to cables crossing*

Mohamed CHAABAN, Jean LEDUC - Institut de recherche d'Hydro-Québec (IREQ),
Varenes, Québec; Canada

C.8.5 *Research on ampacity testing for middle-voltage cross-linked polyethylene (XLPE) cable*

CAI Chengliang, WANG Yongqin - Hubei Electric Power Testing and Research Institute,
Wuhan, Hubei province; China

C.8.6 *Research of upgrading ampacity for high voltage XLPE power cable*

FAN Youbing, ZHAO Jiankang, LIU Songhua, MENG Shaoxin, RAO Wenbin - State Grid
Electric Power Research Institute, Wuhan, Hubei province; China

SESSION A.9

Testing methods - Qualification and Qualification extension

Wednesday June 22nd, 2011 - 11:00 - 12:30

Room A

Chairman : **Willem BOONE** - Kema Nederland BV (The Netherlands)

Rapporteur : **Jonathan BENETEAU** - RTE - CNER (France)

A.9.1 *Working out extension of qualification procedures for HV and VHV cable systems*

Pierre HONDAA - RTE, Paris; France

Éric DORISON - EDF R&D, Moret-sur-Loing; France

A.9.2 *Results of robustness test on medium voltage joints*

Christophe TOURCHER, Christophe MOREAU - EDF R&D, Moret-sur-Loing; France

Roger TAMBRUN - ERDF, Paris La Défense; France

A.9.3 *Tests of outer protection for buried joints, experience and recommendation*

Edwin PULTRUM, Pieter KUIJPERS, Wouter SLOOT - KEMA, Arnhem; The Netherlands

A.9.4 *Development of technology and equipment of PQ test for 500 kV XLPE cable*

systems

YANG Liming, XU Linhua, MENG Shaoxin, XIA Rong - State Grid Electric Power Research Institute, Wuhan, Hubei province; China

YANG Rongkai, HOU Junping - Quality Inspection and Test Center for Equipment of Electric Power, Wuhan, Hubei province; China

A.9.5 HV cable qualification for IEC 62067-2006 and ICEA S-108-720-2004

Caryn RILEY, Raymond C. HILL, Nigel R. HAMPTON - NEETRAC, Atlanta, GA; United States

A.9.6 Special heat cycle voltage test of 275 kV XLPE cable system

Bernardo DAVID, Nicola MOFFA, John McCORMACK, Peter BUTTERFIELD-ROSSI - Electranet, Adelaide, South Australia; Australia

KIM Jeong hyun - Taihan Electric Co, Seoul; Korea

HEO Hoi-deok - LS Cable Ltd, Gumi, Gyeongbuk; Korea

George BUCEA - Consultant, Sydney; Australia

Hans MAYER - Consultant, Melbourne, Victoria; Australia

Henry KENT - Energy Action, Sydney; Australia

SESSION B.9

Partial discharges and diagnostics (2)

Wednesday June 22nd, 2011 - 11:00 - 12:30

Room B

Chairman : **Shoshi KATAKAI** - J-Powers Systems Co. (Japan)

Rapporteur : **Alain TOUREILLE** - Montpellier University (France)

B.9.1 Continuous PD monitoring of HV XLPE cable lines

Wojciech KOLTUNOWICZ, Alija OBRALIC, Alexander BELKOV, Dietmar GISELBRECHT - Omicron Electronics, Klaus, Vorarlberg; Austria

B.9.2 The need for smart diagnostics in future smart grids - A practical example for MV cables

Peter Van der WIELEN - KEMA Nederland BV, Arnhem; The Netherlands

Fred STEENNIS - Eindhoven University of Technology, Eindhoven; The Netherlands

Denny HARMSEN - Alliander N.V., Arnhem; The Netherlands

Danny GELDTMEIJER - Enexis B.V., Rosmalen; The Netherlands

B.9.3 On-line partial discharge monitoring for MV cables with SCG - Practical experiences in the period 2007 to 2010

Fred STEENNIS, Ad KERSTENS - KEMA, Arnhem; The Netherlands

Theo Van RIJN, Piet SOEPBOER - Alliander, Arnhem; The Netherlands

Jan MOSTERD, Leon BOKMA - Westland Infra, Poeldijk; The Netherlands

Alfred ARTS - Enexis, Arnhem; The Netherlands

Nico Van DONK, Branko CARLI - Stedin, Rotterdam; The Netherlands

B.9.4 The thermo mechanical behavior of joints in MV cable systems exposed to high current loads

Fred STEENNIS - KEMA, Arnhem; The Netherlands

Piet SOEPBOER - Enexis, Arnhem; The Netherlands

Jan MOSTERD - Alliander, Arnhem; The Netherlands

Peter BUYS - Stedin, Rotterdam; The Netherlands

Piet OOSTERLEE - DELTA Netwerkbedrijf, Middelburg; The Netherlands

Leon BOKMA - Westland Infra, Poeldijk; The Netherlands

Ralf MEIER - Lovink Enertech, Terborg; The Netherlands

B.9.5 On-line PD spot testing and continuous monitoring for in service power cables - Techniques and field experiences

Malcolm SELTZER-GRANT, Lee RENFORTH, Ross MACKINLAY - HVPD Ltd, Manchester, Connecticut; United Kingdom

Denis DENISOV, Hubert SCHLAPP, Frank PETZOLD - SebaKMT, Baunach; Germany

B.9.6 *Sensitivity assessment for field PD measurements for HV and EHV cable accessories via laboratory tests*

Mark FENGER - Kinectrics Inc., Toronto, Ontario; Canada

Jody LEVINE - HydroOne Networks, Toronto, Ontario; Canada

SESSION C.9

Dynamic cable rating

Wednesday June 22nd, 2011 - 11:00 - 12:30

Room C

Chairman : **Frank DE WILD** - Kema (The Netherlands)

Rapporteur : **Olivier MOREAU** - EDF CIST (France)

C.9.1 *Statistical feedback approach in cyclic rating factor sizing*

Irina GARZULINO, Nicolas POUPARDIN, Anne CHAUVANCY, Frédéric LESUR, Xavier ROLLAND-NEVIERE - RTE, Paris; France

C.9.2 *Dynamic rating of transmission cables*

Erik JACOBSEN, Jonas Fabricius NIELSEN, Steen Beck NIELSEN - SEAS-NVE Holding, Haslev; Denmark

Sven SALWIN - nkt cables A/S, Copenhagen; Denmark

Karl-Heinz COHNEN, Andreas MOHRS - nkt cables GmbH, Köln; Germany

C.9.3 *Online ampacity determination of a 220 kV cable using an optical fibre based monitoring system*

Michael SCHMALE - TenneT TSO GmbH, Bayreuth; Germany

Ralf PUFFER - RWTH Aachen University, Aachen; Germany

Ulrich GLOMBITZA - OSSCAD GmbH & Co. KG, Bergisch Gladbach; Germany

Henrik HOFF - AP Sensing GmbH, Boeblingen; Germany

C.9.4 *Feasibility study report on dynamic cable rating system retrofitted to the existing 138 kV XLPE cable system*

IGI Tsuyoshi, KOMEDA Hidehiko - J-Power Systems Corporation, Hitachi, Ibaraki; Japan

MASHIO Shoji - J-Power Systems Corporation, Tokyo; Japan

Jade WONG, Arnold WONG - ConEdison, New York, NY; United States

C.9.5 *Real time load optimisation of cable based transmission grids*

Rasmus Schmidt OLSEN, Unnur Stella GUDMUNDSDÓTTIR - Energinet.dk, Fredericia; Denmark

Joachim HOLBOELL - Technical University of Denmark, Kongens Lyngby; Denmark

C.9.6 *Impact of moisture migration on the current rating of high operating temperature cables*

James PILGRIM, David SWAFFIELD, Paul LEWIN - University of Southampton, Southampton; United Kingdom

Steve SWINGLER - Southampton Dielectric Consultants, Southampton; United Kingdom

Francis WAITE, David PAYNE - National Grid, Warwick; United Kingdom

SESSION E.9

Young Researcher Contest

Wednesday June 22nd, 2011 - 11:00 - 12:30

Room E: Poster Session

Chairman : **Nouredine HADJ-SAID** - Grenoble INP (France)

Rapporteur : **Jérôme HERRÉROS** - RTE (France)

E.9.1 The program of this Poster Session which will contain the papers from the Young Researchers will be published later.

SESSION A.10

Testing methods - On line testing

Wednesday June 22nd, 2011 - 14:30 - 16:00

Room A

Chairman : **Antony FALCONER** - Aberdare Cables (South Africa)

Rapporteur : **Laurent BENARD** - Prysmian Câbles et Systèmes (France)

A.10.1 Investigation on the technologies for defect localization and characterization on medium voltage underground lines

Gonzalo MAIZ - Iberdrola Distribución, Bilbao; Spain

Armando RODRIGO - Instituto Tecnológico de la Energía, Paterna; Spain

Pedro LLOVERA-SEGOVIA - Instituto de Tecnología Eléctrica - Universidad Politécnica de Valencia, Valencia; Spain

Lluís SALES - Prysmian Cables y Sistemas, Barcelona; Spain

Xavier BALZA - General Cable, Barcelona; Spain

A.10.2 First practical utility implementations of monitored withstand diagnostics in the USA

Chris FLETCHER - Duke Energy, Charlotte, NC; United States

Nigel HAMPTON, Joshua PERKEL - NEETRAC, Atlanta, GA; United States

Jean Carlos HERNANDEZ - Universidad de Los Andes, Mérida, Mérida; Venezuela

Jeff HESSE - Duke Energy, Cincinnati, OH; United States

Mike PEARMAN - Georgia Power, Atlanta, GA; United States

Tim WALL - Alabama Power, Birmingham, AL; United States

Walter ZENGER - Pacific Gas & Electric, San Francisco, CA; United States

A.10.3 A new testing method of LV underground cable insulation

Janislaw TARNOWSKI, Jacques CÔTÉ, André GAUDREAU, Pierre GINGRAS, Mircea IORDANESCU - Hydro-Québec, Varennes, Québec; Canada

A.10.4 Integral cable condition assessment for the complete network

Alexander GERSTNER - Baur Prüf - und Messtechnik, Sulz; Austria

A.10.5 Effect of supply voltage frequency on testing medium voltage cable in the grid

Fabrice ZORZI, Thierry ESPIRIT - EDF R&D, Moret-sur-Loing; France

Roger TAMBRUN - ERDF Direction Réseau, Paris La Défense; France

A.10.6 On-line screening of MV cable network grid through partial discharge measurements

Marco TOZZI, Andrea CAVALLINI, Gian Carlo MONTANARI - Techimp HQ srl, Bologna; Italy

SESSION B.10

Design

Wednesday June 22nd, 2011 - 14:30 - 16:00

Room B

Chairman : **Candelario SALDIVAR** - Viakon Conductores Monterrey (Mexico)

Rapporteur : **José SANTANA** - Prysmian Câbles et Systèmes (France)

B.10.1 Selecting the optimized conductor design

Riccardo BODEGA, Henk GEENE, Jos Van ROSSUM - Prysmian, Delft; The Netherlands

Ron Van den THILLARD - TenneT, Arnhem; The Netherlands

Jacco SMIT - Liandon, Alkmaar; The Netherlands

Mark Van VLIET - Joulz, Rotterdam; The Netherlands

B.10.2 Investigations into the design of EMF mitigation techniques

Matthieu CABAU, Nadja MARAZANOF, Frédéric LESUR, Nathalie BOUDINET, Anne CHAUVANCY, Rémi VATONNE - RTE, Paris; France

B.10.3 Development of cold-shrink HVCA in regard to the critical set of physical properties

Ivan JOVANOVIĆ, Milan UZELAC - G&W Electric Company, Blue Island, IL; United States

- B.10.4** *Evolution in method and performance for bonding the metal screen of UG HV power cable*
 David DUBOIS, Pierre MIREBEAU, Pascal STREIT - Nexans, Calais; France
 NN NN - Silec Cable (General Cable), Montereau; France
 MM MM - Prysmian, Sens; France
 XX XX - RTE, Paris; France
 YY YY - Électricité de France, Paris; France
- B.10.5** *Special bonding and earthing of cables for a 230 kV three phase system with four cables*
 Márcio COELHO - Procable Energia e Telecomunicações SA, Diadema, Sao Paulo; Brazil
 Geraldo ALMEIDA - Techsys Tecnologia e Sistemas S/C Ltda, Santo André, Sao Paulo; Brazil
 Luiz ZANETTA - University of Sao Paolo - USP, Sao Paolo; Brazil
- B.10.6** *Special sheath bonding system for HVAC cables*
 Heinrich BRAKELMANN, Tao DONG - University Duisburg-Essen, Duisburg; Germany
 Volker WASCHK - nkt cables GmbH, Köln; Germany

SESSION C.10

Cable installation - General

Wednesday June 22nd, 2011 - 14:30 - 16:00

Room C

Chairman : **Hans A. MAYER** - Consultant (Australia)

Rapporteur : **Jean-Louis RAUD** - Consultant - SERCE (France)

- C.10.1** *Investigation into the benefits of installing high operating temperature cables in tunnels*
 James PILGRIM, David SWAFFIELD, Paul LEWIN - University of Southampton, Southampton; United Kingdom
 Steve SWINGLER - Southampton Dielectric Consultants, Southampton; United Kingdom
 Francis WAITE, David PAYNE - National Grid, Warwick; United Kingdom
- C.10.2** *A new backfill material with an extremely high thermal conductivity*
 Heinrich BRAKELMANN, Joerg STAMMEN - University Duisburg-Essen, Duisburg; Germany
 Joerg DIETRICH - HeidelbergCement Geotechnik, Ennigerloh; Germany
 Raymund BÖING - Heidelberg Beton, Heidelberg; Germany
 Hans-Peter MAY - nkt cables GmbH, Köln; Germany
- C.10.3** *Backfill replacement saves underground transmission lines cost and postpones investments*
 Geraldo de ALMEIDA, Luis ZANETTA - University of Sao Paolo - USP, Sao Paolo; Brazil
 Athayde MACEDO, Carla DAMASCENO - Ligth SESA, Rio de Janeiro; Brazil
- C.10.4** *Improved cooling of high voltage cables*
 Herbert NYFFENEGGER, Detlef WALD - Brugg Kabel AG, Brugg; Switzerland
 Harry ORTON - Orton International Consulting, Vancouver, BC; Canada
- C.10.5** *Hybrid high capacity transmission circuits - Challenges for cables in series with EHV overhead lines*
 Glenn STAPLETON - Powerlink Queensland, Virginia, Queensland; Australia
 Simon LLOYD - Cable Consulting International, Kent, WA; United Kingdom

SESSION A.11

Closing Session

Wednesday June 22nd, 2011 - 16:30 - 18:00

Room A

The closing session will present two parts:

- Round table : ***State of the art and future prospects of HVDC links by power insulated cables.***
- Jicable'11 Award and closing of the conference.