

# IEEE Power Engineering Society Entity Annual Report

2014

**Entity: Insulated Conductors Committee**

**Chair: Thomas C. Champion**

**Vice-Chair: Frank Frentzas**

**Secretary: Thomas P. Arnold**

## **1. Significant Accomplishments:**

Two standards completed revision in 2014: 1) IEEE 575, “Guide for Bonding Shields and Sheaths of Single-conductor Power Cables Rated 5kV through 500kV” and IEEE Standard 1210, “Standard Tests for Determining Compatibility of Cable-Pulling Lubricants with Wire and Cable.”

Subcommittee E, Administrative Committee, established its first Discussion Group on the “Impact of New Technologies & Economic Issues on ICC and Our Industry.” The group held two meetings where changes in the utility industry were discussed and how these changes are likely to impact the ICC and our industry as a whole. Things the ICC should be doing to address these changes were discussed. An action plan for the future was developed.

ICC published two newsletters during 2014, each distributed electronically to over 1050 attendees and guests. Newsletter topics included:

- The Art of Writing Standards
- Guidebook: ICC’s Agenda App
- Who Was Dr. George H. Bahder?
- IEEE / ICC Awards, Recognitions, and Distinctions
  - IEEE PES Fellows Class of 2014
  - 2014 IEEE Herman Halperin Award
- News from Subcommittee D, Generating Station and Industrial Cables
- Termination & Joints Standards To Be Based on Voltage Class - A New Direction
- Continue the Efforts and Participation
- Keep Your Eye on the Future at the Fall 2014 Education Session in Colorado Springs
- ICC Standards Corner – Call to Action!
- Dr. Bahder’s Power Cable Innovations
- Success for SC B1 at CIGRE
- Schedule of Upcoming ICC and International Events
- The Chairman’s Corner

***Following PARs were issued:***

P532 “Guide for Selecting and Testing Jackets for Power, Instrumentation and Control Cables”, PAR until Dec 31, 2018

P1406 “Guide for the Use of Gas-in-Fluid Analysis for Paper and Laminated Paper-Polypropylene Insulated Cable Systems”, PAR until Dec 31, 2018

P1202 “Standard for Flame Propagation Testing of Wire and Cable”, PAR until Dec 31, 2018

\*P2412 “Standard Test for Determining Circuit Integrity Performance of Fire Resistive Cable Systems in Passenger Rail and Road Tunnels”, PAR until Dec 31, 2018

\*Joint with IAS/PCIC

***Following PAR extensions were issued:***

P400.4 “Guide for Field Testing of Shielded Power Cable Systems Rated 5kV and Above With Damped Alternating Current Voltage (DAC)”, PAR extension until Dec 31, 2016

\*P1242 “Guide for Selecting & Specifying Cables for Petrochemical Plants”, PAR extension until Dec 31, 2016

Established Concentration Banking Account for ICC and entered all financial transactions into NetSuite for 2014.

Held two Committee Meetings, Spring in Kansas City, MO with 400 registered and Fall in Colorado Springs, CO with 357 registered.

Spring meeting was held with over 80% of ICC officers at Committee and Subcommittee levels new to their positions.

Established and distributed templates for submission of Working Group, Discussion Group, and Subcommittee minutes.

Revised and/or wrote scopes for all Subcommittee E, Administrative Committee, Working and Discussion Groups.

Signed contracts for Fall 2015 meeting at Marriott Starr Pass Resort in Tucson, AZ and for Spring 2015 meeting at Westin, Fort Lauderdale, FL.

**2. Benefits to Industry and PES Members from the Committee Work:**

ICC continues to provide industry leading standards intended to assist in the use, production, test, selection, application, maintenance, field testing, and failure analysis of cable and accessories used on power cable systems.

**3. Benefits to Volunteer Participants from the Committee Work:**

Participants receive copies of standards on which they have worked and receive the knowledge that the standards they are using represent the state of the art in our industry. Products in compliance with these standards offer enhanced reliability and ease of use.

By participating, they also receive knowledge of new technologies, application and reliability issues, and the experience of other users and manufacturers on a continuing basis while also personally contributing to the improvement and development of the standards involved.

#### **4. Recognition of Outstanding Performance:**

##### ***IEEE/PES Technical Committee Certificates of Appreciation:***

- John T. Smith, III (General Cable Corporation) for Services Rendered as Chair, Insulated Conductors Committee Spring 2012 – Fall 2013
- Al Kong (Pacific Gas and Electric) for Services Rendered as Chair, Subcommittee A Cable Construction and Design Spring 2010 – Fall 2013
- Frank Frentzas (Commonwealth Edison) for Services Rendered as Vice-Chair, Subcommittee C Cable Systems Spring 2011 – Fall 2013
- Robert Konnik (Marmon Specialty Wire Group) for Services Rendered as Chair, Subcommittee D Generating Station and Industrial Cables Spring 2011 – Fall 2013
- Nigel Hampton (Georgia Tech) for Services Rendered as Chair, Subcommittee F Field Testing and Diagnostics Fall 2011 – Spring 2014
- Jacques Côté (IREQ) for Services Rendered as Vice-Chair, Subcommittee F Field Testing and Diagnostics Fall 2011 – Spring 2014
- Willem Boone (KEMA) for Services Rendered as Chair, Subcommittee G Transnational Activities Spring 2008 – Fall 2013
- Willem Boone (KEMA) for Services Rendered as Chair, Advisory Committee Spring 2009 – Fall 2013
- Mark Fenger (Kinectrics) for Services Rendered as Recording Secretary Spring 2007 – Fall 2013
- Al Mendelsohn (Power Delivery Solutions, Inc.) for Services Rendered as Chair, Educational Programs Spring 2011 – Fall 2013
- Yingli Wen (Exelon / Consolidated Edison) for Services Rendered as Chair, Discussion Group A20 Low Voltage Cable Systems Rated  $\leq 600$  V
- Mike Walker (TE Connectivity) for Services Rendered as Chair, Working Group B8 Standards for Copper and Aluminum Insulated Cable Connectors
- Glenn Luzzi (Richards Manufacturing Company) for Services Rendered as Vice-Chair, Working Group B8 Standards for Copper and Aluminum Insulated Cable Connectors
- Carl Wentzel for Services Rendered as Vice-Chair, Working Group B16 Revision of IEEE 386-95 Standard for Separable Insulated Connector Systems for Power Distribution Systems above 600 V
- Frank Frentzas (Commonwealth Edison) for Services Rendered as Chair, Discussion Group C31 High Pressure Fluid Filled (HPFF) and High Pressure Gas Filled (HPGF) Pipe Type Cable Systems

##### ***IEEE PES Technical Committee Working Group Recognition Award:***

- Working Group C29 Guideline For Working Procedures On Underground Transmission Circuits With Induced Voltage, Chair: Albert Kong (PG&E), Vice-

Chair: Pierre Argaut (Silec Cable), Technical Editor: Nijam Robert Uddin (Commonwealth Associates, Inc.)

***IEEE Fellow Class of 2014:***

- Presented to Kent Brown (TVA) for leadership in standards development for design, testing, and utilization of electrical equipment for the nuclear power industry.

***IEEE Herman Halperin Electric Transmission and Distribution Award***

- IEEE Board of Directors has named Willem Boone (KEMA) as the recipient of the 2014 IEEE Herman Halperin Electric Transmission and Distribution Award with the following citation: “For successful international leadership and guidance in understanding critical factors affecting power cable life and in improving diagnostic test procedures.”

***Dr. George H. Bahder Memorial Award***

- Longfei Cui, a graduate student at Arizona State University, finalized his Master of Science, while working on a project under the guidance of Professor Ravi Gorur. His thesis entitled “Detection and Analysis of Partial Discharges in Non-uniform Field” is available on the ICC Downloads Section of our website.

***2014 Technical Committee Distinguished Service Award:***

- Joe Zimnoch (Okonite) “For leadership in developing, implementing, and providing guidance and education to the utility industry for high-voltage pipe-type cable systems, and for the widespread implementation of laminated paper polypropylene insulation”

**5. Coordination with Other Entities (PES Committees, CIGRE, standards, etc.):**

Thomas Champion, Chair of the ICC, attended the PES Technical Council meetings in New Orleans and Chattanooga, TN representing the ICC. Worked with Lesley Vargas of Substation Battery on implementation of Technical Council PES reorganization.

Walter Zenger (USi) serves as a liaison member between the IEEE PES ICC and CIGRE, attending the CIGRE meetings in 2014 and providing two technical reports to ICC on CIGRE activities.

Rich Vencus (United Illuminating) serves as a liaison member between the IEEE PES ICC and ANSI C119 Committee, attending the ANSI meetings and providing a technical report back to the B8 Working Group, “Standards for Copper and Aluminum Insulated Cable Connectors” within ICC.

Ed Gulski (Onsite HV Solutions AG) made a presentation at the CIGRE SC2 2014 Session in Paris describing the organization of IEEE and ICC, including a description of ICC activities, organization, and standards development.

Kraig Bader (Fort Collins Utilities) made a presentation to the Rocky Mountain Electric League (Fall 2014 Meeting) describing the organization of the IEEE and ICC, including detailed descriptions of ICC activities, organization, and standards development.

**6. New Technologies of Interest to the Committee:**

The committee continues to look at advances in superconductivity and other technologies that will make underground power cables and their accessories more efficient and practical. The committee is attempting to address the changing nature of our industry as consolidation occurs and new technologies and national priorities alter conventional wisdom.

**7. Significant Plans for the Next Period:**

We continue to look at ways to attract new attendees and to convey the message of the importance of standards and sharing of information and user experience in improving product reliability and product flexibility. We particularly want to concentrate on conveying this message at an executive level within the companies that serve our industry.

**Submitted by: Thomas C. Champion                      Date: January 13, 2015**  
**Chair, Insulated Conductors Committee**