

## IEEE SWITCHGEAR COMMITTEE CORRESPONDENCE

Minutes: IEEE High-Voltage Fuses Subcommittee  
Place: Lake Buena Vista, FL,  
Date: Wednesday, April 25th 2017  
Presiding officer: John Leach – Chair  
Recorder: Jim Wenzel - Secretary

### MEMBERS PRESENT

Glenn Borchardt	S & C Electric Company
Sterlin Cochran	Hubbell Power
Gary Haynes	ABB Inc.
Frank Lambert	GT/NEETRAC
John Leach	Consultant - Hi-Tech Fuses/ABB (Chair)
Brad Lewis	AEP
Bobby Moorhead	Dominion
Tim Royster	Dominion Energy
Jon Spencer	Utility Solutions
Jim Wenzel	Eaton

### MEMBERS ABSENT

Jonathan Deverick^	Dominion Virginia Power
Rodolfo Elizondo	Peakdemand.com
Mark Stavnes	S&C Electric Company
Charles Worthington	Hubbell Power

^ correspondence only

### GUESTS

Joshua Arlund	Macleon Power Systems
Chris Borck	Eaton
Kelly Cannon	Hubbell Power Systems
Casey Darden	Hi-Tech Fuses/ABB
Anil Dhawan	Com Ed.
Travis Johnson	Xcel Energy
Jacob Midkiff	Dominion Energy
Chris Morton	PowerTech
Randy Ward	Aluma-Form
Emily Witcher	Hubbell Power Systems
Robert Wolf	Hubbell Power Systems
Danish Zia	Underwriters Laboratories

### HONORARY MEMBERS

John Angelis, L. Ron Beard, Ray Capra, Steve Hassler, Frank Ladonne, Chris Lettow, J. R. Marek, Frank Muench, Don Parker, R. Neville Parry, Herb Pflanz, R (Kris) Ranjan, John Schaffer, Alan Yerges, Jan Zawadzki.

1. **Call meeting to order** - at 1:30 PM
2. **Approval of Agenda** – No changes requested, agenda accepted.

3. **Member/guest introduction** – 10 members, 12 guests. Chris Lettow and Alan Yerges were approved to be Honorary Members. Blake Henard has changes jobs and resigned.
4. **Roster check** – The roster was circulated for corrections
5. **Approval of October 11th 2017 minutes** – No errors reported, so approved.
6. **Report from the Chair** – Jim Wenzel has agreed to be secretary of the subcommittee.
7. **Standards Document Status Report: (see Annex B)**
  - a. C37.40 is still listed as current. John working with IEEE to withdraw it. We combined C37.40 into C37.41-2016.
  - b. Corrigenda for C37.41-2016 published January, 2018
8. **Working Group Reports**
  - a) **Revision of Fuse Standards – J. Leach**
    - a. The Working Group met on April 24<sup>th</sup> and 25<sup>th</sup> 2018, at 8am. There were 17 members (one new) both days and 9 guests on the 24<sup>th</sup> and 7 on the 25<sup>th</sup>.
    - b. John reported that IEEE Std C37.41™-2016/Cor 1-2017, the corrigenda to IEEE Std C37.41-2016 was published January 12th 2018. Clearly, our changes were deemed to be within scope of a Corrigenda, which had been a concern.
    - c. The recently published Corrigenda was discussed. There have been concerns involving difficulties setting up circuits for new test series 4 TRV requirements, and difficulties getting information from link manufacturers concerning which links are in a homogeneous series, something needed for test requirements. Representatives of test stations felt that the circuit difficulties can be solved.
    - d. Work continued on the revision of C37.48. The document is about ¾ reviewed. The WG is slightly ahead of schedule for completing the Guide so we will only meet for one session in the Fall of 2018. We need to wait for the new edition of IEC standard IEC 80282-1 ED8, that we reference, to be completely balloted and published.
9. **Report of liaison to other committees**
  - a) **ER&P Committee – John Leach**
    - a. John reported that the ER&P committee met at 12:00 pm on April 25<sup>th</sup> to review possible awards (which he cannot report on in detail).
    - b. Allan Morse is taking over as chair from John Webb.
10. **IEC Report – John Leach:** (for full report see Annex A)
  - a. MT3 (Maintenance Team 3, Current Limiting Fuses)
    1. No meetings since Oct 2017
    2. 2<sup>nd</sup> committee draft of IEC 60282-1, Ed 8 circulation closed Jan 2018.
    3. Comments circulated Feb 2018. MT will review comments at May 30, 2018 meeting.
    4. Review Report IEC 60644/AMD1 Ed 2 circulated Nov 2017.
    5. Committee draft circulated Nov 2017. No comments received.
    6. Committee draft for vote will be circulated in June 2018 for vote.
  - b. WG8 (Working Group 8 Expulsion Fuses with Polymer Insulators)
    1. Committee draft circulated March 2018.
    2. Results to be discussed in Bled, Slovenia, May 29<sup>th</sup>.
  - c. TC32 (Technical Committee 32)

1. Initiated various working groups and maintenance teams in an effort to show activity to keep the TC alive.
- d. Next meetings May 29-31, 2018 in Bled, Slovenia.
- e. Sterlin Cochran will be the US representative in the subcommittee meetings (John Leach, as Chair of the Subcommittee, does not count as US representation).

#### 11. Unfinished business

- a. No unfinished business.

#### 12. New business

- a. No new business.

#### 13. Next meetings:

Fall 2018 (14 Oct – 18 Oct), Kansas City Marriott Downtown, MO

Spring 2019 (April 28-May 1) Hilton, Burlington, VT

Fall 2019 (Oct 6-10) Catamaran Resort, San Diego, CA

Spring 2020 (May 4<sup>th</sup> – 8<sup>th</sup>) Peppermill Resort, Reno, NV

Fall 2020 (Oct 4<sup>th</sup> – 8<sup>th</sup>) Sheraton Sundance Square, Fort Worth, TX

#### 14. Adjournment – 2:08 PM

#### Annex A

## SC32A - U.S.A. Technical Advisory Group

Dr. John G. Leach, Technical Advisor ♦ [j.g.leach@ieee.org](mailto:j.g.leach@ieee.org) ♦ 828-256-3744 ♦ Fax 828-322-2376

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#### IEC Report 2018-1 October 2017 to April 2018

From: Dr. John G. Leach, Technical Advisor TC32 and SC32A, April 18<sup>th</sup> 2018

#### Summary

Since the October 2017 report there have been no meetings of SC32A Maintenance Teams/Working Groups. A number of documents have been circulated, however.

#### Documents Circulated:

##### a) SC32A, MT3: 32A/326/CD

Circulated 2017-10-13, closing date 2018-01-05. This was the CD for the revision of IEC 60282-1, the current-limiting fuse standard.

##### b) SC32A, MT3: 32A/327/RR

The Review Report for IEC 60644/AMD1 Ed2, was circulated 2017-11-10. This is the document to launch an amendment for the motor circuit fuse standard, removing application information that has been published in IEC/TR 62655:2013 Tutorial and application guide for high-voltage fuses. Target dates were CD: 2017-11-30, CDV: 2018-06-29, FDIS: 2019-02-28 and IS: 2019-06-28.

##### c) SC32A, MT3: 32A/328/CD

The first CD for the amendment to IEC 60644 was circulated 2017-11-10 with a closing date of 2018-02-02. It contained minimal changes and the elimination of application material.

**d) FNC BBR SVO 2017 054**

Circulated 2017-11-27. The French National Committee announced the nomination of Raphaël Buisson to replace Didier Fulchiron as secretary of SC32A on February 1<sup>st</sup> 2018.

**e) SC32A: 32A/329/AC**

Circulated 2017-12-08. This announced the next meeting of SC32A to be in Bled, Slovenia 2018-05-31.

**f) SC32A: 32A/330/DA**

Circulated 2017-12-08. This was the draft agenda for SC32A meeting in Bled.

**g) SC32A, MT3: 32A/331/CC**

Circulated 2018-02-16. This was the circulation of comments to the CD for IEC 60282-1 Ed 8. In addition to “observations of the secretariat” in response to the comments, the “course of action” was that “the committee draft and comments will be discussed at the next meeting on 2018-05-30” (Bled).

**h) SC32A, MT3: 32A/332/CC**

Circulated 2018-02-16. This was the circulation of comments to the CD for IEC 60644-1/AMD 1 Ed 2. There were no comments, so the “course of action” was that “a revised draft will be distributed as a committee draft for vote (CDV) by 2018-06-29” (after the meeting in Bled).

**i) SC32A, WG8: 32A/333/CD**

Circulated 2018-03-02, closing date 2018-04-27. This was the first CD for the new standard IEC 60282-4 Ed1, “Additional testing requirements for high-voltage expulsion fuses utilizing polymeric insulators”. A reduced 2 month circulation time was used to ensure comments could be received and analyzed before the meeting of WG8 in Bled on May 29<sup>th</sup> 2018 (the WG had submitted its draft to the secretariat before January 1<sup>st</sup> but editing had taken a long time).

j) A letter, signed by the Chairs and secretaries of TC32, SC32A, SC32B, and SC32C was sent to the IEC Standards management Board, outlining work plans for its maintenance teams, working groups, and Ad hoc working groups in an attempt to keep the main Committee going (SMB has been threatening to disband the main committee in a similar way that SC32A was under threat). TC32 is scheduled to meet in Shanghai in October 2019, providing it still exists at that time.

**Date and place of next meetings:** Our next meetings are planned for Slovenia in May. The location will be in Bled, about 40 km from Ljubljana airport. It is planned that WG8 will meet on May 29<sup>th</sup> and MT3/MT6 on May 30<sup>th</sup>.

Since John is the Chair of SC32A, and cannot represent the USA, the US Head of Delegation for the Subcommittee meeting is Sterlin Cochran (convenor of WG8).

John Leach, 4/18/18

Annex B: Document Status – April 2018

Document	Title	Sub-Committee	WG Chair	PAR	IEEE Status	Activity/Plans
C37.40	Standard Service Conditions and Definitions for High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories.	HVF			Approved 2003 R2009 TO BE WITHDRAWN	None - Combined with C37.41
C37.41	IEEE Standard Design Tests for High-Voltage (> 1000 V) Fuses and Accessories	HVF	John Leach 828 256 3744 j.g.leach@ieee.org	Corrigendum 1 approved 2017 Expires 2021	Approved 2016	Errata published April 2017. Corrigenda 1 published January 2018
C37.42	IEEE Standard Specification for High-Voltage (> 1000 V) Fuses, and Accessories.	HVF	John Leach 828 256 3744 j.g.leach@ieee.org		Approved 2016	Published (May 2017)
C37.43	Standard Specifications for High-Voltage Expulsion, Current-Limiting and Combination Type Distribution and Power Class External Fuses, with Rated Voltages from 1kV through 38kV, Used for the Protection of Shunt Capacitors	HVF			Superseded	None - Combined with C37.42
C37.45	IEEE Standard Design Tests and Specifications for High-Voltage (> 1000 V) Distribution Class Enclosed Single-Pole Air Switches	HVF	John Leach 828 256 3744 j.g.leach@ieee.org		Approved 2016	Published 2016, Errata published April 2017
C37.46	Standard for High-Voltage (>1000 V) Expulsion and Current-Limiting Type Power Class Fuses and Fuse Disconnecting Switches.	HVF			Superseded	None - Combined with C37.42
C37.47	Standard Specifications for High-Voltage (>1000 V) Current-Limiting Type Power Class Fuses and Fuse Disconnecting Switches	HVF			Superseded	None - Combined with C37.42
C37.48	Draft Guide and Tutorial for the Application of High-Voltage Fuses and Accessories.	HVF	John Leach 828 256 3744 j.g.leach@ieee.org	Approved 2017 Expires 12/31/2021	Approved 2005 R2010	Revision started - Good to 2020
C37.48.1	Guide for the Application, Operation, and Coordination of High Voltage (>1000 V) Current-Limiting Fuses.	HVF	John Leach 828 256 3744 j.g.leach@ieee.org		Approved 2011	None – Good to 2021 To be combined with C37.48.