

## IEEE SWITCHGEAR COMMITTEE

Minutes: IEEE High-Voltage Fuses Subcommittee  
Place: On-line  
Date: Wednesday, April 21<sup>st</sup> 2021  
Presiding officer: Jim Wenzel – Chair  
Recorder: John Leach – Vice-Chair/Secretary

### MEMBERS PRESENT

Glenn Borchardt	S and C
Chris Borck	Eaton
Sterlin Cochran	Oak and Shield LLC (Chair RFSWG)
Gary Haynes	ABB Inc.
Travis Johnson	Xcel Energy
John Leach	Consultant (Sec.)
Chris Morton	PowerTech
Caryn Riley	GT/NEETRAC
Jon Spencer	Utility Solutions
Jim Wenzel	Eaton (Chair)
Robert Wolf	Hubbell Power Systems
Danish Zia	UL LLC

### MEMBERS ABSENT

Bobby Moorhead	Dominion
Rodolfo Elizondo	Peak Demand
Jonathan Deverick <sup>^</sup>	Dominion Virginia Power
Charles Worthington	Hubbell Power Systems
Randy Ward	Aluma-Form

<sup>^</sup> correspondence only

### GUESTS

Joshua Arlund	MacLean Power Systems
Brian Betts	Mersen
Rich Frye	Eaton
Hemanth Jala	S&C Electric Co
Pete Marzec	S&C Electric

### HONORARY MEMBERS

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

- 1. Call meeting to order** - 1:30 pm (Central DS time)
- 2. Approval of Agenda** – Proposed Caryn Riley, seconded Sterlin Cochran, approved.
- 3. Member/guest introduction** – After our last meeting, Caryn Riley, Travis Johnson, and Danish Zia became eligible for membership, and are welcomed to the Sub-Committee.

There were therefore 12 members present, with 5 members not in attendance and 5 guests.

4. **Roster check** – Caryn Riley, Travis Johnson, and Danish Zia are added to the roster. Emily Witcher has resigned due to a job change. Josh Arlund will be eligible for membership after this meeting.
5. **Approval of October 7<sup>th</sup> 2020 minutes** – There were no corrections to the last meeting minutes and they were approved as circulated (proposed Sterlin Cochran, seconded Robert Wolf).
6. **Standards status report**
  - a. C37.40: superseded by C37.41-2016 and now shown as superseded in IEEE “shop”.
  - b. C37.41: published April 2017, Corrigenda issued May 2017. **New PAR** for it to be combined with C37.42-2016, approved March 2020, expires Dec 2024.
  - c. C37.42: published May 2017.
  - d. C37.45: Published April 2017.
  - e. C37.48: New revision published **August 2020**.
  - f. C37.48.1: This document has been Incorporated into the revision of C37.48, in accordance with its PAR, and so is now obsolete.
7. **Working Group Reports -**
  - a. Revision of fuse standards – C37.41: Sterlin Cochran  

Sterlin reported that the WG meeting was held at 8:00 am on April 21<sup>st</sup> (on-line). Twenty-two people were present 19 members and 3 guests. A second draft document (conflating C37.41 and C37.42) had been produced and work started reviewing the document from the beginning. A number of issues arose and were discussed. Also, the improvements to the expulsion fuse testing tables, which had been made as a result of a decision at the last meeting, were discussed. Additional changes are to be made to increase “user friendliness” particularly in regard to the number of components to be tested (since not all components are changed after every test). Members have been assigned various tasks to be completed before the fall meeting.
8. **Report of liaison to other committees -**
  - a. ER&P Committee – J. Wenzel
    1. There was no meeting.
9. **IEC Report – J. Leach – (full report Annex A)**
  - a. Since the October 2020 report there have been no live meetings but two TC 32 Chair’s Advisory Group on-line meetings. A Questionnaire was issued by the Technical Committee that appeared to be a New Work Item Proposal (NP) but on the wrong form and with insufficient information. This was for a new standard for fuses that use LV technology and test methods, but for voltages within the scope of the HV subcommittee. After an on-line meeting of the US TAG for TC32, the USA voted negative. There were sufficient affirmative votes for approval of a new WG, but insufficient experts were nominated for an NP. However, it turned out that it was supposed to be for a Provisional Work Item (not a new project) and there will be a further call for experts.

- b. There are no plans for in person meetings at the moment before the General meeting in San Francisco 2022. The US TAG has been trying to obtain sponsorship in order for TC32 etc. to get an invitation.

**10. Unfinished business** – Sterlin Cochran and Caryn Riley reported that the Technology and Innovation Committee continues to look for participation in some of its task forces. The areas covered are:

1. Influence of renewables on switchgear (will focus on part 1: Open gap 200% power frequency testing), Sterlin is part of this group and there has been some focus on partial discharge testing. The group has looked at switchgear and, so far, not fuses.
2. Special switchgear applications, not covered in the standards. They are looking to produce a Technical report and are anxious to interview employees of utilities.
3. Asset management in issues of aging equipment (end of life, diagnostics)

**11. New business** – none

**12. Future meetings** -

Fall 2021 (October 10-14) Peppermill Resort, Reno, NV

Future meetings in negotiation.

**13. Adjournment - 2:05 pm**

Submitted by John Leach, 4/22/2021

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

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### **IEC Report 2021-1 October 2020 to April 2021**

From: Dr. John G. Leach, Technical Advisor TC32 and SC32A, April 20<sup>th</sup> 2021

#### **Summary**

Since the October 2020 report there have been no SC32A maintenance team meetings, but on-line meetings of TC32 Chair's Advisory Group on December 16<sup>th</sup> 2020 and April 9<sup>th</sup> 2021. The TC/SC/MT meetings in Paris, January 11<sup>th</sup> -15<sup>th</sup> 2021, were cancelled and it is now hoped that in-person meetings will be possible at the 2022 General Meeting in San Francisco. An on-line meeting of the US TC 32 TAG was held on March 3<sup>rd</sup> to discuss the US position on a TC32 Questionnaire.

#### **TC 32 CAG web meeting, December 16<sup>th</sup> 2020**

It was stated in the last TAG report that there was a proposal for a new TC32 working group, to develop a standard for LV fuses that had been developed with voltages over 1 000 V for "special" purposes. Exactly what these purposes were was a little vague. It was also proposed that the wording of the scope of SC32B would be changed to prevent such fuses coming under its scope so that it would be the responsibility of TC32. It was

decided to launch a WG to study the issues of these HV/LV fuses by issuing a “Questionnaire” or “Q” document early in 2021. Other topics of discussion included concerns over “colloidal silver” being banned in Europe and possible spill-over of silver in general being declared “repro-toxic” and facing bans. Efforts were also to be made to obtain sponsorship of the 2022 General Meeting from US manufacturers along with references to TC32 and its subcommittees and MTs. In reality, to get an invitation to attend the GM requires sponsorship.

### **USA TAG for TC32**

Central office issued a Q document (32/241/Q) on January 22<sup>nd</sup> 2021. It was written as though it was an NP (new work item proposal) but did not follow the rules for an NP (including a draft document or detailed outline of the proposed standard). In reality it was intended to be a request to form a WG to look into a PWI (Preliminary Work Item) but did not state this. Because of the confusion, the US TAG TC32 met, on-line, to discuss this (the first time the TAG has met in at least 30 years) and agreed to vote negative on the grounds that the requirements for an NP had not been met in the “Q”. The ballot met one of two requirements of an NP with a 2/3 pass rate (despite three negative votes - Spain, France and the US). However, it did not meet the other requirement – to have at least 4 countries name an expert to the WG (only 2 named experts).

### **TC 32 CAG web meeting, April 9<sup>th</sup>, 2021.**

The Questionnaire was discussed. The secretary of SC32B (the person pushing for the WG to discuss HV/LV fuses), admitted he got the Q wrong – the intent was to create a PWI. Central Office still claimed the Q was successful in forming a WG (something disputed by both me and the Secretary of SC32A). They intended to send out an INF (information) form to seek members for the WG (also disputed as the correct procedure by the TC32A secretary and me – it is supposed to be by administrative circular). I intend to join the WG if and when it is formed. I have expressed concern to the CAG that I am quite uncomfortable by the thought of HV fuses being on the market that have not been tested to any of our recognized HV fuse standards, unless they are for very specialized applications (such as for semiconductor protection).

We are still waiting to hear whether we have been issued an invitation to San Francisco in 2022 – so far, we have received commitments of sponsorship from:

Littelfuse - \$20,000, Mersen - \$5,000, J & E Leach - \$5,000. Sponsorship is necessary if one hopes to get an invitation!

**Date and place of next meetings:** Next on-line CAG meeting June 28<sup>th</sup> 2021. Next in-person TC/SC/MT meetings at the 2022 General Meeting in San Francisco, USA, October 2022, (hopefully).

John Leach, 04/22/21