

IEEE SWITCHGEAR COMMITTEE CORRESPONDENCE

Minutes: IEEE High-Voltage Fuse Subcommittee
Place: Lake Buena Vista - FL
Date: May 18th 2011
Presiding officer: John Leach - Chair
Recorder: Frank Muench - Secretary

MEMBERS PRESENT

G. Borchardt	S & C Electric Company
G. Haynes	ABB Inc.
J. G. Leach	Consultant - T&B/Hi-Tech Fuses
Chris Lettow	S&C
F. J. Muench	Cooper Power Systems
R. N. Parry	Cutler Hammer
T. E. Royster	Dominion Virginia Power
M. Stavnes	S & C Electric
Alan Yerges	Cooper Power Systems

MEMBERS ABSENT

J. G. Angelis*	Consultant
R. L. Capra*	Consultant
D. Gardner^	Thomas & Betts – Hi-Tech
S. P. Hassler*	Cooper Power Systems
F. Ladonne*	Underwriters Laboratories
J. R. Marek^	Consultant
D. Parker	Alabama Power
R. Ranjan*	Consultant
J. S. Schaffer*	G & W Electric Co.
J. Zawadzki	Powertech Labs Inc.

* Correspondence Only ^ Excused

GUESTS

Nicholas Brusky	Eaton
Sean Moody	Mersen

1. **Call meeting to order** - at 1:30 PM
2. **IEEE Patent policy** – Presented and reviewed. Slides shown
3. **Member /guest introduction** – 9 members 2 guests
4. **Roster check**– roster circulated for correction. Alan Yerges and Chris Lettow have requested membership. Since they meet the requirements for membership we are pleased to accept them.
5. **Approval of September 29th 2010 minutes** – Reviewed and approved without change.
6. **Report from the Chair:** Nothing to report
7. **Standards status report:** Attached as Annex “C”. Summary:
 - a. C37.40 – 2003 reaffirmed 2009

- b. C37.41 – 2008
- c. C37.42 – 2009
- d. C37. 43- 2008
- e. C37.45 – 2007
- f. C37.46 – 2010
- g. C37.47 – Recirculated and submitted to standards board for approval,
- h. C37.48 – Reaffirmation 2010
- i. C37.48.1 – Revision, first ballot completed.

8. Working Group Reports

a. Revision of Fuse Specification Standards – M. Stavnes

Met on the morning of May 17th, with 12 members and 3 guests.

- C37.47 Completed ballot review. Final document has been submitted and is ready for September Standards Board meeting. The present working group will remain in place until C37.47 is published.
- Task group has reviewed the possibility of consolidation of C37.42, 43, 45, and 47, and agreed that the consolidation should take place. Goal is to create a par in one year. The new document will match the organization of C37.40 and C37.41. This was proposed to the Subcommittee as a motion, and passed unanimously.
- A study group to prepare the PAR for the new document was proposed and accepted. Mark Stavnes was appointed by the Chair to lead this Group.
- The Working Group proposed that the Revision of Fuses WG also begin reviewing, and revising C37.41 and C37.40 simultaneously, to make sure the new standard and proposal aligns with those documents.
- Detailed notes from the WG meeting are attached as Annex "A".

b. Revision of Fuse Standards - J. G. Leach

- Met on the morning of May 18th, with 16 of 18 active members present (including one new member) and 4 guests.
- Since the last meeting, the reaffirmation of C37.48 was completed successfully.
- The first PC37.48.1 Ballot (draft 5) was completed on May 8th, and approximately 120 comments were received. Comments were reviewed and response to the comments was developed. There were 3 negatives that were reviewed and contact will be made to verify that the changes proposed will allow removal of the negatives.
- There will be a recirculation ballot after the negatives are reviewed.
- The revision of fuse standards working group requested approval to investigate changes to C37.41 and C37.40 to align with the newly proposed consolidation. Approval was granted.

9. Report of liaison to other committees

ER&P Committee – J. G. Leach:

- a. At the fall switchgear committee we will request a group to prepare a presentation of the C37.48.1, which is being balloted. The goal would be to present this at next T&D Conference.
- b. Presentations of a technical nature, at the subcommittee meetings, will be welcomed. Ideas, of a non-commercial nature are solicited.

10. Report of IEC activities - J. G. Leach:

John reported on IEC activities - the full TAG report is attached as Annex "B".

11. Unfinished business - none

12. New business – None

13. Next meeting: Fall 2011: Nashville TN, Loews Vanderbilt Hotel, 9th - 15th October.

Spring 2012: St. Pete Beach, FL, Tradewinds Island Grand Resort, (28th April-4th May)

Fall 2012: San Diageo (tentative)

14. Adjournment - 2;30PM

Annex "A" – Notes from the RFSS WG meeting

- It was agreed that not only should we work to make the specification document consistent with C37.41, but we should really be at the same time trying to make C37.41 and this combined document more consistent with the IEC 60282 series of documents. That means, for example, having the IEEE documents written mainly with Distribution Fuses (similar to IEC Class A) and Power Fuses (similar to IEC Class B) be the main way the standard is organized. It was further agreed that the switches that are included in the scope should be a third, generally separate, section of the document to make things cleaner.
- It was proposed that the sub-classes of Distribution Fuses in IEEE (i.e. enclosed cutouts, open cutouts, open-link cutouts, etc.) if there are in fact any situations where they do not meet the qualifications of the general Distribution Fuses, these will be referred to as exceptions to the "standard" Distribution Fuse as opposed to being listed as a completely separate device as we generally do today, but also clearly called out in the standard as valid exceptions due to the way they are applied.
- It was also proposed and generally agreed, subject to the actual text of course, that in the context of the above, we should also go all the way and eliminate all the non-standard preferred ratings from the list of preferred ratings going forward. We would include historical background information (i.e. such as that enclosed cutouts historically only had 5.5 and 8.3 kV preferred ratings) in an appendix. Jim Marek agreed to begin working on that appendix text.
- I will work on a draft 4 that will attempt to organize the document per the above points.
- All Working Group members should review the general document and any suggestions they have, since we will be looking at C37.41 at the same time, forward them to John Leach and me. Questions or concerns about Definitions in C37.40 will be handled by John, but I would like to be copied to make sure that both documents stay consistent.
- At the Wednesday HVF Subcommittee meeting it will be proposed that we form a working group to work on this document with me as the chair (unless somebody else wants to step forward) with the goal to be in a position to apply for a PAR around 1 year from now.
- All working group members were asked to return to me their comments on the Title, Introduction, Scope and Purpose before the fall meeting. These are the items that need to be included in the PAR submittal, and it would be best if we could come to agreement on them before submitting. (Thinking more about this after the meeting, while I will not be able to attend the fall meeting, it may be that Frank will need to run the meeting so we can come to an agreement on these sections so we can get the PAR application done before Spring 2012.

Annex "B" IEC TAG Report

SC32A - U.S.A. Technical Advisory Group

Dr. John G. Leach, Technical Advisor ♦ j.g.leach@ieee.org ♦ 828-256-3744 ♦ Fax 828-322-2376

IEC Report 2011-1 May 2011



From: Dr. John G. Leach, Technical Advisor SC32A, May 12th 2011

IEC actions since October 2010:

There have been no "official" IEC meetings in the last six months, but a lot of work has been achieved by two of the group, MT7 who are revising the capacitor fuse document and WG6 who are writing the fuse user's guide.

MT7

This group met under the convenorship of John Leach in September 2010 and the result of the meeting was a new draft of IEC 60549 issued in November. Comments were received and a new draft issued in January 2011. After further comments a Committee Draft was prepared and submitted to IEC in March in time for the scheduled release (April 2011). Comments are due to IEC by July 22nd. A meeting of MT7 to discuss received comments is scheduled for September 11th in Maribor, Slovenia, the day before the ICEFA conference begins.

WG6

The committee draft of the new Fuse User's guide was circulated on October 1st with a closing date of January 7th. Over 200 comments were received. A meeting on WG6 is scheduled for May 30th in Frankfurt, to review these comments. Due to the size of the task, the convenor (Norbert Stein and Secretary (John Leach) decided to meet in the UK in March 2011. In a meeting hosted by Harold Handcock at Cooper Bussmann in Burton, and attended by Phil Rosen, they reviewed all comments and made proposals for most of them, to be considered by the WG in Frankfurt. A new draft showing most of the proposed changes has also been prepared for the meeting.

MT3

After a brief meeting following MT7 in London September 2010, MT3 has made no progress on a revision of IEC 60282-1 (CL fuses) as the time scale is such that a CD does not need to be issued until late 2011. However the plan is to finalize a CD before the meeting in Maribor, when MT3 will be able to approve the CD for circulation,

John Leach, 5-12-11

Annex C

Document	Title	Sub-Committee	WG Chair	PAR	IEEE Status	Activity
C37.40	Standard Service Conditions and Definitions for High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories	HVF	John Leach 828 256 3744 j.g.leach@ieee.org		Approved 2003 R2009	None
C37.41	Standard Design Tests for High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories	HVF	John Leach 828 256 3744 j.g.leach@ieee.org		Approved 2008	None
C37.42	Standard Specification for High-Voltage Expulsion Type Distribution Class Fuses, Cutouts, Fuse Disconnecting Switches and Fuse Links	HVF	Mark Stavnes 773-338-1000, Ext. 2071 MStavnes@sandc.com		Approved 2009	None
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	John Leach 828 256 3744 j.g.leach@ieee.org		Approved 2008	None
C37.45	Standard Specifications for High-Voltage Distribution Class Enclosed Single-Pole Air Switches with Rated Voltages from 1kV through 38kV	HVF	Mark Stavnes 773-338-1000, Ext. 2071 MStavnes@sandc.com		Approved 2007	None
C37.46	Standard for High-Voltage Expulsion and Current-Limiting Type Power Class Fuses and Fuse Disconnecting Switches	HVF	Mark Stavnes 773-338-1000, Ext. 2071 MStavnes@sandc.com		Approved 2010	None
C37.47	Standard Specifications for High-Voltage Current-Limiting Type Power Class Fuses and Fuse Disconnecting Switches	HVF	Mark Stavnes 773-338-1000, Ext. 2071 MStavnes@sandc.com	Approved 2009-13 Revision	Approved 2000	Revision submitted to Standards Board
C37.48	Guide for Application, operation, and Maintenance of High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories	HVF	John Leach 828 256 3744 j.g.leach@ieee.org		Approved 2005 R2010	None
C37.48.1	Guide for the Operation, Classification, Application, and Coordination of Current-Limiting Fuses with Rated Voltages 1-38kV	HVF	John Leach 828 256 3744 j.g.leach@ieee.org	Approved 2009-13 Revision	Approved 2002 R2008	In ballot.