C37.74 Working Group Meeting Minutes

March 17th, 2023 10:00 AM – Virtual.

Chair: Kennedy Darko

Secretary: Travis Johnson
Minutes taken by K. Trost

Meeting Agenda

1. Call to Order — K Darko

The meeting was called to order at 10:04AM CDT.

2. Call for Patents — K. Darko

The Patent and Copyright slides were provided with the agenda.
No patent or copyright items were brought to the chair's attention.

3. Introduction of Members and Guests — K Darko

Introductions were entered into the meeting chat.

4. Attendance and quorum check — K. Trost

13 members (of 18) and 2 guests were present at the meeting.
Quorum was achieved.

5. Approval of Agenda — K. Darko

C. Riley - Motion to approve the agenda.
I. Rokser - Second.
Agenda was approved by consensus with a revision to state March 17th.

6. Approval of Previous meeting minutes — K. Darko

I. Rokser - Motion to approve the Minutes of March 7, 2023.
D. Martin - Second.
Minutes were approved by consensus.

7. Action Items — K. Darko

Editorial and Technical proposals / reviews draft D1.3

1) Table 5 (Comment #4) – Suggestion to use Reactive / Non-Reactive to address introduction of alternative gases (non-SF6)
   a) If we use Reactive/ Non-reactive – do we need to add additional temperatures like the example shown? If we follow the recommendation of 100.7, we would replace (air) with reactive and (SF6) with non-reactive. We could also add the footnote (g) from C37.04.
   b) It was noted that in IEC the terminology is Oxidizing vs not oxidizing. The definitions are almost identical (Oxidizing = Reactive vs not Oxidizing = Non-reactive).
   c) There were 0 opposed, 1 abstention. **It was agreed to make this change.**
2) Comment #6 – Suggestion to add a mechanical duty design test (similar to C37.62)
   a) Discussion on if we should add a test of this type.
      i) Attendees agreed in principle.

ii) Discussion that this may require an additional unit as the current version of the type test sequence can be performed on a single sample.
iii) There were no objections or abstentions with the concept of adding a mechanical duty test.

b) Discussion on the number of operations. C37.62 calls out 2000; IEC documentation offer classes (M1-M3).
i) Initial proposal is either 1000 operations (as load break often operate less frequently that fault interrupters) or 2000 operations to match C37.62.
(1) One user noted that in their specifications they require 2000.
ii) Question on if operation to ground should require the same number of operations.
iii) Discussion on the number of manual vs automated operations as many load interrupter switches have the option to add a motor or automated operating system.
(1) Language was drafted to say:
iv) "The load-interrupter switch shall be subjected to a minimum of 2000 close-open operations without maintenance. The operations may be performed using manual or electrical actuation. For switches which may be operated by both manual or electrical actuation means, at least 1800 operations shall be performed by electrical actuation and a minimum of 200 operations shall be performed using manual actuation."
(1) No objections, no abstentions, **the language will be added to the draft.**

c) Discussion was held on the number of open – ground operations.
i) It was pointed out that there are 150 operations performed between Table 7 & Table 8.
ii) It was noted that in IEC 62271-102 has a minimum of 1000 operations for earthing switches.
iii) For now, no additional open-ground operations will be added.
iv) Vote on using the 150 operations from Table 7 & 8:
(1) None opposed, no abstentions, **this is approved**.

d) Discussion was held on a necessary number of operations needed for visible break devices.
i) As the visible break (separate from a load-interrupter) is a maintenance device it would be less than the number of load-interrupter operations.
ii) Based on use for maintenance, suggestion that it match the grounding switch (150).
iii) One user agreed that was a reasonable requirement.
iv) Discussion that if a visible break is operated the same as the load-interrupter they both must meet the same number of operations (2000).
v) Suggestion to use the terminology independently operated visible break. (Meaning that it is not operated with the load-interrupter.)
vi) Vote on using 150 operations: None opposed, 1 abstention, **this is approved**.
vii) The visible break team will include this in their proposal.

e) Discussion on if fused-loadbreak ways should be included in this new subclause.
i) Suggestion that the language used be "The number of operations for fused-loadbreak ways and ground switches shall be as defined in Table 7 and Table 8."

3) Subclause 7.7.7 (Comment #7)
a) Proposal to harmonize with C37.62 for pre-test values.
b) One test lab noted that the values in C37.62 are higher than what is typically used for cables and cable terminations. (IEEE 386 uses 1.2.) This may mean a conflict between the standards for the DSG.

i) Another lab noted the conflict with IEEE 386, but also noted that the value in C37.62 is lower than the previous versions.

c) It was suggested that the PD levels be matched to IEEE 386 levels.
   i) Discussion on if the PD levels in C37.74 are for everything (the DSG) or the switch only (based on that C37.62 is the interrupter component level only.)

d) Suggestion to use the peak value.

e) **C. Riley and K. Darko to review this before the next meeting.**

7. **Next Meeting:** A doodle poll will be sent out to arrange one more virtual meeting before the Spring in-person meeting.

8. **Adjournment**

The meeting was adjourned at 11:31 AM CDT.

Attendees:

Role	First Name	Last Name	Company Name	Virtual 03/17/2023
Member	Edwin	Almeida	Southern California Edison	X
Member	Harm	Bannink	G&W	X
Member	David	Beseda	S&C Electric Co.	
Chair	Kennedy	Darko	G&W Electric Co	X
Member	Frank	DeCesaro	DeCesaro Consulting Services, LLC	X
Member	Jeffrey	Gieger	ABB/Elastimold	X
Member	Harold	Hirz	G&W	
Member	Rahul	Jain	S&C Electric Company	X
Secretary	Travis	Johnson	Xcel Energy	X
Member	Donald	Martin	G&W Electric Co.	X
Member	Stephen	Pell	Siemens	
Member	Caryn	Riley	Georgia Tech/NEETRAC	X
Member	Grant	Ringham	BC Hydro	
Member	Ian	Rokser	Eaton Corp	X
Member	Victor	Savulyak		X
Member	Francois	Soulard	Hydro-Quebec	
Member	Joseph	Stemmerich	Trayer Engineering Corporation	X
Member	Karla	Trost	G&W Electric	X

Guests:
Kelsey Bush, ABB/Elastimold
John Kapitula, ABB