C37.62 – Fault Interrupters

April 23, 2018 – Disney World, Orlando, FL

Chair: Antone Bonner
Secretary: Frank DeCesaro

Meeting Minutes

1. **Call to order and introduction:**
   - Meeting was called to order at 8:01 AM
   - Call for patent claims were made and there were no claims raised.
   - Roster sheet was started and each person introduced themselves and identified their affiliation.

2. **Roster Check:**
   - Group has 29 members, XX Attendees, of which 15 are members.

3. **Previous Meeting Minutes:**
   - Minutes are on the PES website.

4. **Meeting Highlights:**
   - We are about ready to ballot. It should be going out in the next few weeks. The items discussed in October meeting have been added and we will be going over it today
   - Common clauses, C37.100.1-2017 Draft, has copyright issues and we cannot reference the document anymore. Changes have been made because of this, which will be explained later.
   - In the ballot process we have two roles, first as balloters so we review and submit our personal comments. Then as a working group to review and address all comments. We will discuss those roles in a bit.
   - Review of changes made since October meeting
     - References to IEEE 1247 were removed and the relevant information from 1247 was imbedded into our document. IEEE 1247 will eventually be replaced by IEEE C37.30.4 but that is not available yet.
     - Parts of C37.60-2017 was brought into C37.62
       - for line charging and cable charging.
       - Change from C1/C0 from 1 to 2.
       - Restrike considerations for line and cable switching
       - Fault making current testing for non-interrupting gaps was brought in.
       - TRV information on Kpp moved to the Informative annex.
       - Ice loading was added
       - Demonstration of the proper operation of indicators and levers once the icing had been completed.
       - Post-testing dielectric verification
       - Restrike limitations for short-circuit testing added
       - Thermal runaway test for checking a device if needed after a test program had been completed.
       - C57.12.28 reference has the same date as in C37.74

- Simulated Surge Arrester Operation (SSAO). Was this now limited to only overhead units? The padmounted gear does not fit into the reason why the test as added to C37.60. It was suggested to take it out but chair has been reluctant until more feedback.
  - A user stated he has not experienced damage to controls from lightning surges to padmounted controls.
  - Question: Are there overhead fault interrupters? Yes, there are some. Often it is overhead that connects to a cable system.
  - Motion: Karla Trost moves that Section 7.111.3 for simulated surge arrester operation test only be applicable for pole mounted equipment. Seconded by Jeff Gieger. There were 13 Yes, no Nayes, and no abstensions
    - Discussion: Since this is connected to a pole are there arresters on the riser pole?
      - One user experienced arrester failures with riser pole installation the switchgear did not survive the restrike reflections. The situation is statistically very low occurrence. Line to ground faults can have issues with controls, do these contribute to the arrester fault, not the surge?

- Common clauses C37.100.1-2017
  - Many clauses in C37.62 referenced both IEEE C37.100.1-2017 and IEC 62271-1 common clauses. There are about 100 of these dual references clauses. Several meetings ago, it was decided to remove reference to IEC 62271-1.
  - C37.100.1-2017 was ready for publication but waiting copyright approval from IEC since, due to the effort to harmonize, much of the content was from IEC.
  - IEC did not give permission to use the copyrighted material since the amount was greater than their rules allow. The amount of material was greater than 80% of the total material in IEEE C37.100.1-2017. They do not allow more than 10%. RevCom cannot approve the standard without the copyright.
  - ADSCOM had some teleconfrerences (in Nov and Dec 2017) to discuss issues with C37.100.1. They came up with:
    - Each working group should review and revise their document to reference the IEC document and remove any reference to the IEEE document.
    - There is an option is to use C37.100.1 – 2007 and reference that. They are applying to extend that life of that document for two years to give us time to move to 62271-1.

    Other items from ADSCOM teleconferences:
    - When we reference IEC we do not need to accept everything that is in there. We can accept and reject whatever we want. Which can work for us.
    - IEC rules that once published their documents are then unchanged for 10 years.

    WG discussion:
    - In conjunction with the ADSCOM recommendations, references to IEEE C37.100.1-2017 were removed and replaced with IEC 62271-1:2017.
    - We had tended to go away from the IEC document and reference the IEEE document.
    - ADSCOM is meeting today to discuss the status of what will happen. Dave Stone, who chaired C37.100.1 has stepped down.
    - Several users stated that they prefer IEEE documents because they were easier to obtain than IEC documents is.
    - The chair did a comparison between C37.100.1 – 2007 and 2017. There was more clarity in 2017, the 2005 had 30% content and could be an issue with IEC if it was

reaffirmed. (IEEE later assured us that IEEE C37.100.1-2007 was okay to use without copyright concerns)
        - The ADSCOM meeting may have impact on what we are doing at this meeting. If so, we will be contacted by the chair and work on what is needed.
        - Comment – In RODE we want some commonality of our equipment standards.
        - Comment – Is there dual logo considerations? For this standard no, because the fault interrupter does not have a wide background of people.
        - It was pointed out that partial discharge standard IEEE 301 adapted the IEC standard. It was further pointed out that the adapted standard was dated and now that IEC changed we need to review ours again.
- Anyone that has draft 5 please look at it for any errors or changes needed in the next week or so.
- Balloting process. The chair stressed that the first ballot is important for voting on. Once the first ballot has been taken, comments resolved, the scope of subsequent ballots are limited the new changes made to the standard based the comments of the first ballot. n the ones that did not have comments are not open for balloting on reballots unless there is a technical error. The subsequent ballots can only deal with changes made since the previous ballot. Compare it to C37.74, C37.60, and C37.100.2
    - How long should we give balloters to respond. Chair feels 30 days is too short. Thinks 6 weeks is better. Group decided to go for 6 weeks.
    - Motion: Nenad Uzelec moved that C37.62 draft 6, which references IEC 62271-1, go to ballot unless the outcome of the Adscom and RODE discussion this week changes the direction associated with the IEC reference. Seconded by Francois Soulard. 13 Ayes, 0 Nayes, 0 Abstentions

        - Discussion: Question on draft version resolved.
        - Discussion: How will we take the outcome of the Adscom discussion today? One outcome would be for us to reconstitute the working group and work on the C37.100.1 2017 until the IEC content is lowered. If this is the case and a C37.100.1 was provided we could use then would have to wait to ballot.
        - Question: Does RODE have a guidance on this? This will be discussed at Wednesday's RODE meeting.
- Project Time was discussed. (see presentation slides)
- Question? Is the current ballot pool still valid or does it need to be refreshed? (The chair has talked to Erin Spiewik and she said it must be restarted)
- Question? Can WG members have access to common clause documents needed to review. Chair thought not but will check with IEEE. (After checking with several individuals it seems we will not have access to it.)
- Results of the ADSCOM meeting regarding this should be sent to members? It will be in the RODE notes.

5. **New Business;**
    - No new Business.
6. **Next meeting:**
    - October 14-18 In Kansas City, MO
7. **Meeting was adjourned at 9:31 AM.**

Annex: Member Attendance

Role	First Name	Last Name	Company	4/23/2018
Member	Peter	Agliata	Hubbell Power Systems	X
Member	Herman	Bannink	KEMA Netherlands	X
Chair	Antone	Bonner	PAS Consulting	X
Guest	Kelly	Cannon	Hubbell Power Systems	X
Guest	Krystle	Carstens	Thomas & Betts	X
Guest	Michael	Culhane	Eaton	X
Guest	Kennedy	Darko	G&W Electric Co	X
Secretary	Frank	DeCesaro	Eaton's Power Systems Division	X
Guest	Anil	Dhawan	ComEd	X
Member	William	Ernst	Thomas & Betts	X
Guest	Mark	Feltis	Schweitzer Engineering Laboratories, Inc	X
Member	Paul	Found	BC Hydro	X
Member	Jeffrey	Gieger	Thomas & Betts	X
Guest	Peter	Glaesman	PCORE Electric Company, Inc.	X
Guest	Harold	Hirz	Thomas and Betts	X
Guest	Rahul	Jain	S&C Electric Company	X
Member	Travis	Johnson	Xcel Energy	X
Guest	Brendan	Kirkpatrick	Southern California Edison	X
Guest	Bradley	Lewis	AEP	X
Member	Donald	Martin	G&W Electric Co.	X
Guest	Jacob	Midkiff	Dominion Energy	X
Guest	Christopher	Morton	Powertech Labs Inc.	X
Guest	Stephen	Pell	Siemens	X
Member	Larry	Putman	Powell Electrical Systems Inc.	X
Guest	Robert	Ramsey	Bechtel	X
Guest	Anthony	Ricci	FirstEnergy Corp.	X
Guest	Caryn	Riley	Georgia Tech/NEETRAC	X
Member	Ian	Rokser	Eaton Corp	X
Guest	Joe	Rostron	Southern States LLC	X
Member	Timothy	Royster	Dominion Virginia Power	X
Guest	James	Ruebensam	S&C Electric Co.	X
Member	Francois	Soulard	Hydro-Quebec	X
Guest	Jon	Spencer	Utility Solutions	X
Guest	Craig	Thompson	SEL	X
Member	Karla	Trost	G&W Electric	X
Member	Nenad	Uzelac	G&W Electric	X
Guest	Michael	Whitney	S&C Electric Company	X

Submitted by:
Name: Antone Bonner
Date: May 7, 2018