

C37.62 – Fault Interrupters

October 10, 2016 – Pittsburgh – Sheraton Station Square

Chair: Antone Bonner

Secretary: Frank DeCesaro

Meeting Minutes

1. Call to order and introduction:

- Meeting was called to order at 1:31 PM.
 - Antone Bonner chaired and explained what this working group is about.
- Roster sheet was started and each person introduced themselves and identified their affiliation.

2. Roster Check:

- 29 Attendees, of which 16 are members. A quorum was present. Attendance is shown in Annex A.
- We had (7) new attendees, two of which requested member status. The chairman approved the member requests after the meeting.

3. Previous Meeting Minutes:

- Minutes are on the PES Switchgear Committee website. No comments made regarding them.

4. Meeting Highlights:

- Today we will review the work that has been accomplished this summer which has been included in the document.
 - Working on Draft 4 which is the version to be balloted. Working group does not have this yet. There are WG comments to add to it. Antone will send it to WG members by Oct 28. (Note – After WG meeting I found items that had been approved by the WG but had not been added in. Therefore my delay in getting a copy to WG.)
 - Accomplishments:
 - Noted that overhead parts had been removed when this was converted from C37.60. That has been put back in.
 - Issues with tank constructions verified
 - Pressure tank withstand tests added
 - Added some definitions. Verification of clause, figures, table, numbering, and format issues.
 - Reviewing Draft 4
 - Incorporated the past year and a half plus this summer's work. Antone performed an editorial check, etc. Some editorial problems still being resolved.
 - Karla Trost worked on the pressure tests.
 - There were conflicts with common clauses and other standards.
 - Difference between common clauses and C37.74 is that C37.74 is not referencing the common clauses.
 - There were only two real changes.
 - Section 6 under gas and vacuum tightness reference to IEC removed.

- Section 7.9.2, closed pressure systems for gas, the verbiage referenced 6.8.2 of C37.100.1 and then completely copied the text into the section.
- In C37.74 there is a submersion test. If you read through common clauses you will get the same result therefore we will use common clauses. However no where do we define closed pressure, sealed pressure plus some others and recommended it to be included in this document.
- **ACTION ITEM:** Anil Dhawan will provide some verbiage for 3.15 to Antone.
- **ACTION ITEM:** The definition shown is an IEC definition. Do we need permission to use? Antone Bonner will check this out.
- A request was made that the fault interrupter be operated during the submersion test.
 - Comment: Utility installs remote operation to save time of pumping out vaults and the unit may be remotely operated when submersed. Likewise, fault interruption may occur during submersion. Therefore, the design test should demonstrate a capability to operate while under water.

There was good discussion on this subject. It sounds like we should be more specific in our requirements.

8.104 b) talks about manual tripping by the tripping lever. Is this from C37.60 when we are looking under submersion?

ACTION ITEM: Each manufacturer will propose what is practical for their equipment and send in to Antone for consideration.

Question, how do the labs determine if the operation is a pass or fail? What guidelines are to be used to do so?

Separable connectors IEEE 386 only cover down to 6 ft. which is usual surface conditions. Going lower is unusual and that the manufacturer should be consulted.

ACTION ITEM: Francois Soulard will submit his companies specification on submersible testing to Antone Bonner. This will be in French though.

- What is the clearing time definition. In C37.60 we have a good graph but we have nothing in C37.62. Are the other definitions from C37.60 in C37.62? **ACTION ITEM:** Antone will look at the new dictionary and see if it is defined there or we need to merge in from C37.60
- The ballot pool takes about 30 days to form. Antone would like the final draft to be completed before then.

- Is the intention to keep one TRV for fault interrupters or will there be two TRV's for underground and overhead?
 - This has been discussed quite a bit. The tables in draft 3 and draft 4 cover three phase and single phase. The first table covers overhead gear at currents above 4 kA (faster TRV). The second one covers overhead gear under 4 kA and all underground gear (slower TRV).
- After today's meeting
 - Last year we had about 74 people on the ballot group. Only about 47% of the WG members were included in the ballot pool. We would like to have as many people from the working group in the ballot pool as possible. Talked to IEEE and understood that we can't add or modify a ballot pool once established. But we can form a new ballot pool which will be done. We would like to have 75% of the working group members sign up for the ballot pool. Antone will inform working group members once the ballot pool starts forming.
 - Plan on balloting in November
 - Results in by the end of the year.
 - Antone will go through and identify what seems to be acceptable, which will need more discussions, and which may be rejected in his opinion. That list will be sent to the working group and comment back on it before the Spring meeting.
 - PAR expires the end of 2017.
 - It appears that C37.60 may be done middle of 2017 at the earliest.

5. New Business;

- None.

6. Next meeting:

- Spring 2017 (23 Apr – 28 Apr), Hilton Charlotte University Place, Charlotte, NC

7. Meeting was adjourned at 3:07 PM

Submitted by:

Name: Antone Bonner

Date: 10/21/16

Annex: Member Attendance

Attendance at Fall 2016 Meeting of the WG for IEEE C37.62 (Fault Interrupters)

| Role | First Name | Last Name | Company | City | State |
|-----------|------------|-----------|--|-----------------------|-------|
| Secretary | Frank | DeCesaro | Eaton's Cooper Power Systems Division | Franksville | WI |
| Member | Jeffrey | Gieger | Thomas & Betts | Dingmans Ferry | PA |
| Member | William | Walter | We-Energies | Waukesha | WI |
| Member | Peter | Agliata | Hubbell Power Systems | Birmingham | AL |
| Member | Chris | Lettow | S&C Electric Company | Buffalo Grove | IL |
| Member | Tom | Stefanski | KEMA Powertest | Chalfont | PA |
| Member | David | Beseda | S&C Electric Co. | Chicago | IL |
| Member | Travis | Johnson | Xcel Energy | Denver | CO |
| Member | Karla | Trost | G&W Electric | Bolingbrook | IL |
| Member | William | Ernst | Thomas & Betts | Hackettstown South | NJ |
| Member | Ian | Rokser | Eaton Corp | Milwaukee | WI |
| Member | Donald | Martin | G&W Electric Co. | New Lenox | IL |
| Member | Timothy | Royster | Dominion Virginia Power | Gum Spring | VA |
| Member | Francois | Soulard | Hydro-Quebec | Montreal | QC |
| Member | Chris | Ambrose | Federal Pacific (Div. of Electro-Mechanical Corp.) | Bristol | TN |
| Guest | Peter | Glaesman | PCORE Electric Company, Inc. | Goldsboro | NC |
| Guest | Harold | Hirz | Thomas and Betts | Solon Oakbrook | OH |
| Guest | Anil | Dhawan | ComEd | Terrace | IL |
| Guest | James | Ruebensam | S&C Electric Co. | Chicago | IL |
| Guest | Kevin | Rogerson | Eversource | Ellington | CT |
| Guest | Robert | Smith | Retired | Ithaca South | NY |
| Chair | Antone | Bonner | Eaton | Milwaukee | WI |