

RODE PC37.66 WG, Capacitor Switches

October 1st, 2012, San Diego, CA



Chair: Harry Hirz

Meeting Minutes

1. Call to order and introduction:

The PC37.66 WG Capacitor Switches Standard Working Group met on Monday, 1-October-2012, at 1:30 PM. Harry Hirz, Working Group Chairman, presided over the meeting.

2. Roster Check:

There were 9 members of the working group and 13 guests present at the meeting. We presently have 16 members but 2 have not been active or in sessions for the last several years therefore they will be removed from the active members list.

3. Previous Meeting Minutes

- The agenda was presented and approved.
- The previous minutes were presented and approved.

4. Project Status & Timeline

Revision Details, Accomplishments & Current Schedule:

- Standard Revision Due: December 2014
- Project Authorization Request (PAR): Approved June 2010
- Draft Level: 3 (Reviewed during our meeting)
- The Standard planned for ballot: TBD (Dependent on PC37.100.2 approval but WG is targeting the Spring 2014 for potential balloting of PC37.66)

5. Meeting Highlights

a. General Overview:

- All comments during and resulting from this working group meeting will be recorded in Draft 4. No new updates/revisions from C37.100.2 have been received since our spring 2012 meeting.

b. Review of draft Sections:

- Section 5: Hand out from Edgar Dullni on C37.66 clauses 5 and 6 and Annex B presentation. See website for a copy of this document.
 - We need to know why column #5 on table 3 is rated 80% of the symmetrical fault making current. In the old standard it was rated 50% of the symmetrical fault making current. Hirz will check with Dullni and get back to the group.
 - Also, we have reduced the inrush current frequencies per the older standard. We should justify why this was done since Table 3 would generally have higher frequency requirements compared to Table 2.

- Clause 6.4.1 Discussion:
 - Hirz will go back to Dullni for further discussion. The group is not proposing to eliminate the second fault making current yet. We will see if it is discussed in C37.100.2 Common Clauses for Capacitor Switching. Today the circuit has been in the standard for many years.
 - Clause 6.5.2 Tolerances
 - The +/- 10% tolerance wording on this section needs to be reviewed and potentially revised associated with the negative tolerance note. Also this tolerance level will be reviewed against Common Clauses.
 - Clause 6.5.3.2 (random switching)
 - No change planned so this clause will stay the same at this point.
 - Question to group on Annex B (explanation of tables).
 - Adjustments will be made accordingly in the standard.
 - Open Issues: Switching procedure
 - All of these will be under consideration and review under the scope of Common Clause.
 - Open Issues: Current Limiting Fuses
 - Material and comments received and will be potentially included in an Annex addition.
- c. Testing Section Open Item Discussion:
- Proposal from Kirk Smith on eliminating clause of 6.5.1.1 to do single phase tests at 1.2 x rated maximum phase to phase voltage.
 - Presentation given by Kirk Smith during the meeting. This will put on the website.a
 - He discussed a paper from Zaborsdky and Rittenhouse and does not necessarily agree with the findings.
 - He discussed testing requirements within IEEE 1247
 - There is a rationale for the table. Hirz will attach some documents that will support this. Retain ratings as they are until common clauses determine route to go.
- d. Comments from Antone Bonner on draft 3. Items not noted are agreed with:
- 3.1 is in C37.100 but Hirz will revisit this to see if a better definition is available.
 - 3.4 will remove language that states “single pole” which then include both single and three phase devices.
 - 3.5 Hirz will clean up the inconsistencies in the document.
 - 3.6 leave as is.
 - 3.7 was clarified as rms. Talked about in the ratings. No further action at this time.
 - 3.8 no change from standard definition
 - 3.11 definitions created for this standard. Should be ok the way it is.
 - 3.13 Hirz will look at this definition again.
 - 4.1)h Antone Bonner will check into this if the currents have the same guidelines to be considered normal.

- 4.2.5 Hirz will add some language for clarity on this.
 - 5.1 p4 Fine, will be addressed in draft 4
 - 5.1 p5 No changes proposed here
 - Wrap-up of the remaining 32 comments: Since all the comments could not be properly reviewed during our working session, Harry will put comments together and get them to Antone for review. If Antone is in agreement, then they will be sent to the working group for further review and comment.
- e. Feedback from User, Manufactures and Labs using the standard:
- No additional comments presented during this meeting associated with using the standard.
 - Enhancements and additions to the Annex sections were reviewed and a decision was made to move forward on the following:
 - Add a section associated with the potential impact of harmonics. – **Antone Bonner to review material and potential outline of the new Annex.**
 - NSDD reference information through either Annex or informative note(s). – **Kirk Smith provided references documents. This item will be reviewed during C37.100.2 to determine at what level this topic will be addressed. No assignment was made during this meeting to specifically move forward with this new Annex.**
 - Adding fuse protection for lower rated devices. – **Frank Muench provided various standard references for review as the basis of the new Annex during the Spring meeting. Harry Hirz will work on the potential outline for the Annex before the next meeting.**

6. Assignments and Target dates:

- Meeting Documents will be uploaded onto our website by WG Chair by **17-October-2012**
- WG Chair to update Draft 4 and send out to WG for comments by **end of October 2012**
- WG comments back to Chair will be determined later and will be based on the C37.100.2 Draft revision status.

7. New Business:

No new items were presented or discussed.

8. Next meeting:

Spring 2013 April 28 - May 2, 2013 The San Luis Resort, Galveston, TX

9. Meeting Adjourned: 3:17pm

Member Attendance

Name	Company	Member or Guest
Adigwu, JP	Southern Cal Edison	G
Ambrose, Chris	Federal Pacific	M
Befus, Craig	BC Hydro	M
Behl, Bob	ABB	M
Bonner, Antone	Cooper Power Systems	M
DeCesaro, Frank	Cooper Power	M
Feltis, Mark	Schweitzer Engineering Inc	G
Fitchett, Douglas	AEP	G
Glaesman, Peter	Reuel	G
Glennon, Bill	SEL Inc.	G
Heinrich, Christian	Siemens AG	G
Herzog, Reid	OG&E	G
Hirz, Harry	Thomas & Betts	M
Jankowich, Ed	T&B	G
Mulcahy, Tom	Dominion VA Power	G
Smith, Kirk	Eaton Corporation	M
Soulard, Francois	Hydro-Quebec	G
Stone, Dave	Cooper Power	M
Swank, Jim	Cooper Power Systems	G
Swisher, Andrew	Southern Cal Edison	G
Yerges, Alan	Cooper Power	G
Zawadzki, Jan	Powertech Labs	M

Submitted by:

Harry Hirz

Working Group Chairman, C37.66

Standard Requirements for Capacitor Switches for Alternating-Current Systems Subcommittee

1-October-2012