

Minutes for Working Group PC37.30.1

April 12, 2022

Orlando, Florida

- The working group met for two sessions on April 12th.
- 33 participants were in attendance at the first and second session. See the attached attendance roster.
- 14 out of 17 Working Group members attended the first session constituting a quorum and 14 out of 17 constituting a quorum for the second session.
- Attendees introduced themselves with their affiliations.
- WG Chair Carl Reigart addressed the members and guests of the WG to identify any patent conflicts and reviewed patent slides
 - There were no members or guests that brought up any patent conflicts to the WG.
- WG Chair went through IEEE SA copyright slides and informed the WG the following from the PowerPoint slides:
 - IEEE SA's copyright policy is described in Clause 7 of the IEEE SA Standards Board Bylaws and Clause 6.1 of the IEEE SA Standards Board Operations Manual;
 - Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy;
- WG Chair summarized the ballot.
 - Ballot had 77% return rate
 - Ballot had 80% approval rate
 - Recirculation had return rate 79%
 - Recirculation had 88% approval rate
 - Once the proposed standard has achieved 75% approval, comments in subsequent ballots shall be based only on the changed portions of the balloted proposed standard, portions of the balloted proposed standard affected by the changes, or portions of the balloted proposed standard that are the subject of unresolved comments associated with Do Not Approve votes. If comments are not based on the above criteria, the comments may be deemed out-of-scope of the recirculation.
- WG Chair went through the recirculation comments.
 - Reviewed comment on Annex C Clause C.9
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on Clause C.8 to improve figure inserts of figures C.1 and C.2
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on Annex C Clause C.3 (Different origins of O2 and O3 need to be explained)
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on B.5.1 to explain abbreviation for 3PST

- Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - WG reviewed comment again and decided to explain it 3 pole single throw.
- Reviewed comment on B.4 with incorrect equation reference.
 - Disposition status accepted to correct the equation
- Reviewed comment on B.3
 - Disposition status accepted to correct the equation
- Reviewed comment on B.2 Vp is not adequately specified and readers may assume arc voltage suggesting to write in maximum line-to-ground voltage
 - WG Chair suggested to insert words in parenthetically and WG approved
- Reviewed comment on 7.2.4.1 for to make a Note out of paragraph for successful completion of the power frequency and lightning impulse open gap withstand voltage test
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on 7.2.2.11 where the description of test conditions is not sufficient and to remove the dew withstand voltage test.
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on Clause 7 where it has the incorrect header and to write Design Tests instead of Test Code
 - IEEE C37.30.1-2011 Section 7 was titled Test Code
 - Disposition status was suggested to accept to rename to Design Tests
 - Bill Hurst informed the WG that 7.11 of Clause 7 is routine tests with the Test Code section.
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on 6.12 incorrect word to replace “customer” with “user”
 - Disposition status accepted to replace “customer” with “user”
- Reviewed comment on 6.8.1 where the use of “magnitude” is misleading (Rated short-time (symmetrical) withstand current magnitude and duration)
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on 6.5.1 to change to leakage current distance
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on 6.1.1 to change to leakage current distance
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on 5.6 missing current specification in Table 11, Table 9, and Table 6 and to write short circuit withstand currents
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment 5.5.6 Note 1 is missing in Table.

- Note 1 referred to column 4 and WG revised comment to add SEE NOTE 1.
 - Reviewed comment on 5.5.6 In line (g) the maximum allowable temperatures are 10 degrees C less than other rows.
 - WG Chair informed WG that these columns include loadability.
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on 5.5.6
 - Explain QO33 and PO22 and decide either a subscript or
 - WG informed working group that it's been in document since 1979
 - Disposition status rejected reason due to historical and correct.
 - Reviewed comment on 5.5.6 to use 43 instead of 57.
 - Disposition status accepted due to mistake in document.
 - Reviewed comment on 5.5.6 on why observable temperatures in column 4 for enclosed switches are so much lower than for non-enclosed switches and for WG to explain rationale behind that.
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on 5.5.6 that there is no rationale given for equations (4) and (5) for enclosed switches and to give rationale for the application of equations (4) and (5)
 - Jeramie Cooper asked if there were any references in the document.
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on 5.5.4 to remove the concept of ACCC and introduce the temperature rise procedures known from other standards e.g. C37.100.1 i.e. focus on maximum temperature at 40°C ambient
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on 5.5.6 to be consistent with the terms all over the text. Use "limits of observable temperature rise" where applicable and refer to columns (2) and (4) in addition.
 - Disposition status accepted.
 - Reviewed comment on 5.4.2.4 to remove test for dew withstand on enclosed switches.
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
 - Reviewed comment on 5.1 to write withstand voltage in Note C
 - Disposition status accepted.
- First session adjourned 9:43 AM.
- Second session began at 10:16 AM
 - Reviewed comment on Clause 5 and Table 2 for regulator bypass.
 - WG agreed that it was appropriate to add definition for bypass switches.
 - WG explored to see if bypass switch definition was in definitions document.

- WG Chair proposed to get a task force for definition for regulator bypass switch to get definition in 2 weeks
 - Pete Kowalik, Danny Hoss, Wei Zhang volunteered for task force
 - Danny Hoss proposed definition for regulator bypass switches: An air switch consisting of multiple blades to connect or bypass a voltage regulator.
 - Discussion was opened
 - Wei Zhang brought up concern with connect or bypass and having either option and not both.
 - Wording was revised to An air switch consisting of multiple blades to connect and bypass a voltage regulator.
 - WG accepted comment and added definition.
- Reviewed comment on 4.1.3
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on 4.1.2
 - Disposition status rejected with out of scope reason due to document not changing for recirculation.
- Reviewed comment on Annex B to change both instances to guide instead of standard.
 - WG suggested to revise comment and remove guide from Annex B
 - Jeramie Cooper brought up that Annex B has additional text that has guide.
- Reviewed comment to consider moving Note 3 to Table 14.
 - Danny Hoss brought up that Note 3 and how it addresses phase spacing and suggested to accept comment and move to Table 14.
- Reviewed comment that Table 14 looks out of place
 - WG Chair showed how Table placement was handled in 2011 and had subclause for preferred ratings tables and figures
 - New subclause would give separation
 - WG agreed to add subclause **6.16 Preferred ratings tables and figures**
- Reviewed comment on 6.4.5 where does not match 15% on Table 2 notes.
 - WG suggested revising footnote C that the bypass disconnect shall be rated for no less than 10% of the rated power frequency voltage of the main disconnect blades.
 - Wei Zhang opened discussion with 10% being too small for actual system voltage.
 - Danny Hoss brought up that in 6.3.5 there is verbiage in there to withstand 10% of the line-to-ground power frequency voltage.
 - Pete Kowalik Table 22 has minimum length of break metal-to-metal with 1"
 - WG Carl Reigart proposed to form a task force to propose solution in next two weeks.
 - Task force consisted of Danny Hoss, Pete Kowalik, Wei Zhang, and Devki Sharma

- WG Chair informed the group that the next steps will be compiling all of the information for bypass switches and getting in touch with IEEE editor. Then, will send draft to working group and then proceed with recirculation.
- Meeting adjourned 11:33 AM

Jacob Blake
WG Secretary

Name	Affiliation	Member/Guest	Attendance Session 1	Attendance Session 2
Gordon Barber	Hubbell	G	X	X
Jacob Blake	Hubbell Power Systems	Secretary	X	X

Brett Boles	Southern Company	M	X	X
Chris Borck	Eaton	G	X	
Stephen M Cary	2-Phase Solution	G	X	X
Mohit Chhabra	S&C Electric	G	X	X
Timothy Cook	Pascor Atlantic	M	X	X
Jeramie Cooper	Eaton	M	X	X
Stacey Davies	Siemens	G		X
Frank DeCesaro	DeCesaro Consulting Services	G	X	
Boubacar Diallo	Southern States	G	X	X
Steven Donahue	Royal Switchgear Manufacturing	M	X	X
Brennen Fleming	Hubbell	G	X	X
Gary Haynes	ABB	NVM	X	X
Douglas Hill	S&C Electric	G	X	X
Danny Hoss	Southern States	M	X	X
Bill Hurst	GE	M	X	X
John Kaminski	Siemens	M	X	X
Pete Kowalik	Cleaveland Price	M	X	X
Colby Lovins	Federal Pacific	G	X	
Neil McCord	KEC Precision LLC	G	X	X
Christopher Morton	Powertech Labs, INC.	G	X	X
Sachin Pingle	ABB	G	X	X
Laura Reid	Hubbell Power Systems	M	X	X
Carl Reigart	Hubbell Power Systems	Chair	X	X
Caryn Riley	Georgia Tech/NEETRAC	G	X	X
Rob Ross	Cleaveland Price	G	X	X
Jen Santulli	IEEE-SA	G		X
Devki Sharma	Entergy	M	X	X
Jon Spencer	Utility Solutions	M	X	X
Victor Sovulyak	KEMA	G	X	
Truett Thompson	Siemens	G		X
Joseph Usner	AEP	M	X	X
Adam Voyles	Ameren	G	X	X
Randy Ward	Aluma-Form	G	X	X
Jim Wenzel	Eaton	G	X	X
Charles Worthington	Hubbell	G	X	X
Wei Zhang	Southern Company	G	X	X