

Minutes for Working Group C37.30.1

October 7-8, 2019

San Diego, CA

- The working group met for three sessions; two sessions on Monday October 7th and one session on Tuesday October 8th.
- 41 participants were in attendance over the two days. There was a quorum at each session. See the attached attendance roster.
- Attendees introduced themselves with their affiliations.
- WG Chair Carl Reigart addressed the members and guests of the WG to identify any patent conflicts.
 - There were no members or guests that brought up any patent conflicts to the WG.
- WG reviewed editorial and technical comments
 - WG Carl Reigart mentioned that he will email out copy of spreadsheet of editorial comments and ask for comments on his proposed resolution for each of the items not discussed with the WG.
 - Motion carried to allow WG Chair Carl Reigart to handle editorial comments on topics not discussed in WG.
 - WG reviewed Comment 14 – remove date from C63.2-2009 -2009 10HZ to 40 GHZ, 9 HZ to 40 GHZ.
 - WG Chair Carl Reigart tabled to discuss with NEETRAK to ensure that changing from 10HZ to 9HZ will not have any adverse effects on testing.
 - WG reviewed line 365 to address comment about referencing NESC and how to cite it correctly in document.
 - Jim Houston tasked to look into it.
 - WG reviewed line 385 comment about the definition of ACCC repeating in 5.5.5. The commenter commented about having it in two locations could cause text to not match in the future if it changes in one location.
 - Motion was brought up to WG to leave definition in two places.
 - Vote taken and unanimously in favor of rejecting comment and leaving definition in two places.
 - WG reviewed line 643 comment about fault making ratings and capabilities. Commenter believed that the sentences were contradictory.
 - Danny Hoss proposed 5.7.1 and 5.7.2 to break out independent operation and dependent operation.
 - Jacob Blake proposed wording for 5.7.1 and 5.7.2
 - WG wanted to clearly differentiate between fault initiating switches and interrupter switches.
 - WG settled on section clause 5.7 Fault-Making current of Fault Initiating Switches with subclauses 5.7.1 Fault-Making Current Rating for Interrupter Switches, 5.7.2 Fault-Making Current Capability, and 5.7.3 Fault-Making Current Rating for Fault Initiating Switches
 - WG reviewed Line 852 where reference to table A.1 is incorrect in regulator bypass section.

- Jim Houston researched, and proper table is Table 14.
- WG reviewed Line 935 where there is an m) instead of a) because it is first in list.
 - WG proposed to move fault initiating switches back up to 6.8.1.
- WG reviewed Line 970 and add NOTE 1 under rated lightning impulse.
 - NOTE 1 – close lightning arrester coordination may allow lower lightning impulse values. Traditional values are shown in bold font.
 - WG chair brought up Tables notes are informative footnotes are normative.
 - WG accepted proposed change to put NOTE 1 in the header.
- WG reviewed Line 979 and WG recommended adding the same NOTE 1 from Table 13 to table 14.
- WG reviewed Line 1992 to replace deleterious of the following sentence.
 - “It should also be recognized that although a switch a cable of interrupting currents of a certain magnitude, that interruption may have deleterious effects on connected equipment on the circuit.”
 - WG revised comment and changed deleterious to detrimental.
- WG reviewed IEC 60815 comment that it should not be in both normative references and in the bibliography.
 - WG recommended to delete IEC 60815 and refer to C37.100.1.
- WG reviewed Line 372 comment that IEEE 1247 should be changed to C37.30.3.
 - WG recommended to revise referencing C37.30.3 and C37.30.4 instead.
- WG reviewed Line 373 with the request to remove date reference of C37.100.1-2018.
 - Ken Edwards suggested that WG ensure that the same clauses apply in 2007 version as 2018 version.
 - WG Chair to go through removing date of C37.100.1 and ensure that the same clauses are in the 2007 version.
- WG reviewed Line 384 air switch definition comment about arcing horns “The switching device may be equipped with arcing horns”. Commenter suggested that the air switch may have other devices added to it.
 - WG accepted comment to remove this from definition.
- WG to look at using 100.1 for usual and unusual service conditions which includes pollution class.
 - Small study group formed with Jim Houston, Rodolpho, and John Kaminski.
 - Jim Houston leading that group and reporting back in one month.
- WG reviewed Line 621 comment about the possibility of higher values for peak current should be mentioned here.
 - WG accepted Donnie Swing’s proposal of the following sentence: “It should be noted that higher X/R ratios are possible, and such occurrences result in higher peak withstand current values due to a slower dc time constant.”
- WG reviewed Line 627. WG comment about clarifying the rated peak withstand current and changing .166 to 10 cycles.
 - WG revised comment and used “The rated peak withstand current is the maximum instantaneous current which the switch shall be required to carry while in the closed position. The peak withstand current as listed in column 3 (or column 4 for 50 Hz) of Table 5 occurs at the first major peak of a dc-offset short

circuit current, and the test to prove this capability shall have a total duration of not less than 10 power frequency cycles.”

- WG removed reference in 5.6.2 to duration.
- WG reviewed Line 651 to specify that this voltage is at power frequency.
- WG accepted comment to change to line to ground power frequency voltage.
- WG reviewed Line 653 where comment asked to refer to test clause in section 7.9.
 - Danny Hoss objected to adding this. Pete Kowalik seconded the objection.
 - Rejected based on not adding value to the document. Listed in table of contents.
- WG reviewed Line 660 comment about ice testing thickness 10 mm and 20 mm are larger than 3/8 and ¼”.
 - Comment rejected based on existing follows IEEE-SA Manual and that values are preferred and cannot be precisely measured consistently across the entire switch.
- WG reviewed Line 680 to add note to 5.14 Rated Closing Time (for Power Operated Switches)
 - WG added the following note “NOTE- Preferred ratings and testing requirements have not been established. Consult manufacturer for this information.”
- WG Chair Carl Reigart stated that work was still in process to review Annex B.
 - The ad hoc group consisting of Jim Houston, Brett Boles, Carl Reigart, and Laura Reid will present at the next meeting the changes to Annex B and address several comments about Annex B at the next meeting.

Jacob Blake
WG Secretary

Role	First Name	Last Name	Company	10/7/2019 Session I of III	10/7/2019 Session II of III	10/8/2019 Session III of III
Guest	John Paul	Adigwu	Southern California Edison			
Guest	Edwin	Almeida	Southern California Edison			
Guest	Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)			
Secretary	Jacob	Blake	Hubbell Power Systems	X	X	X
Guest	Frank	Blalock	Southern States LLC			
Member	Brett	Boles	Southern Company	X	X	X
Member	Christopher	Borck	Eaton's Power Systems Division	X	X	
Guest	Mohit	Chhabra	S&C Electric Company			
Guest	Charles	Cleaveland	Cleaveland/Price Inc.			
Guest	Sterlin	Cochran	Oak & Shield LLC			
Member	Timothy	Cook	Pascor Atlantic	X	X	X
Member	Jeramie	Cooper	Eaton	X	X	X
Guest	Charles	Corley	Eaton			
Member	Philippe	Corriveau	MindCore Technologies	X	X	X
Guest	Randall	Creach	AZZ Switchgear Systems			X
Guest	Frank	DeCesaro	Eaton's Power Systems Division			
Guest	Federico	Di Michele	CESI S.p.A.			
Member	Steven	Donahue	Royal Switchgear Manufacturing	X	X	X
Guest	Randall	Dotson	Lakeland Electric, City of Lakeland, FL			
Guest	Bernie	Dwyer	PECO	X	X	X
Guest	Ken	Edwards	FirstEnergy Corp.	X	X	
Member	Jesus	Elizondo Yerena	Peakdemand	X	X	X
Guest	Richard	Frye	Eaton		X	
Guest	Jose	Gamboa	The H-J Family of Companies			X
Member	Ilya	Glinsky	Southern California Edison			
Member	Francisco	Guzman	Southern California Edison	X	X	X
Member	John	Hall	Tennessee Valley Authority		X	
Corresponding Member	Kenneth	Harless	Pascor Atlantic			
Member	Gary	Haynes	ABB Inc.	X	X	X
Guest	Matthew	Hetzer	PEPCO	X	X	X
Member	Danny	Hoss	Southern States	X	X	X
Member	James	Houston	Southern Company Transmission	X	X	X
Member	Bill	Hurst	GE	X	X	X
Guest	Joseph	Jasinski	ITC Holdings Corp.			
Member	John	Kaminski	Siemens	X	X	X
Guest	jungdae	kim	hyosung			
Guest	Brendan	Kirkpatrick	Southern California Edison			
Member	Thomas	Kohler	Ameren		X	X
Member	Peter	Kowalik	Cleaveland/Price Inc.	X	X	X
Guest	Michael	Lafond	ABB			X
Guest	Patrick	Lalonge	Mindcore Technologies			
Guest	Scott	Lanning	S&C Electric			
Guest	John	Leach	Consultant			
Guest	Gustavo	Leal	Dominion Energy			
Guest	Marc	Lesperance	S&C Electric Canada Ltd.			
Guest	Bradley	Lewis	AEP			
Guest	Wangpei	Li	Eaton			
Member	Qian	Li	Powertech Labs INC.	X	X	X
Guest	Alex	Lizardo	Cargill			
Guest	Nathan	Loucks	Hubbell Power Systems			
Guest	Douglas	Mason	ComEd			
Guest	Neil	McCord	KEC Precision		X	
Guest	Peter	Meyer	S&C Electric Company			
Guest	Daleep	Mohla	DCM Electrical Consulting Services, Inc.			
Guest	Jeremy	Moore	Pascor Atlantic			

Role	First Name	Last Name	Company	10/7/2019 Session I of III	10/7/2019 Session II of III	10/8/2019 Session III of III
Guest	Robert	Moorhead	Dominion Energy			
Guest	Ashley	Moran	IEEE Standards Association (IEEE-SA)			X
Guest	Christopher	Morton	Powertech Labs Inc.			X
Guest	Jordan	Oliver	Hubbell Power Systems			
Guest	Miklos	Orosz	Myers Controlled Power			
Guest	Pathik	Patel	Duke Energy			
Member	Laura	Reid	Hubbell Power Systems	X		X
Chair	Carl	Reigart	CDR Technical Services, LLC	X	X	X
Guest	Roman	Reyes	Bechtel			X
Guest	David	Rhein	Hubbell			
Guest	Anthony	Ricciuti	Eaton Corporation			
Guest	Brent	Richardson	Hubbell			X
Guest	Caryn	Riley	Georgia Tech/NEETRAC			
Guest	Andrew	Roberson	Siemens			
Guest	James	Ruebensam	S&C Electric Co.			
Member	Devki	Sharma	Entergy	X		X
Guest	Ryan	Sherry	ITC Holdings Corp.			
Guest	Sushil	Shinde	ABB Inc.			
Guest	Michael	Shook	Hubbell Power Systems			
Member	Jon	Spencer	Utility Solutions	X		X
Corresponding Member	Kyle	Stechschulte	AEP			
Member	Donald	Swing	Powell Industries		X	
Member	Francois	Trichon	Schneider Electric	X		
Member	Joseph	Usner	American Electric Power (AEP)	X	X	X
Guest	James	van de Ligt	CANA High Voltage Ltd.			
Guest	Mark	Waldron	National Grid			
Guest	Randy	Ward	Aluma-Form			
Guest	John	Webb	ABB			
Guest	Jerry	Wen	BC Hydro		X	
Guest	James	Wenzel	Eaton		X	X
Guest	John	Willis	Maclean Power Systems			
Guest	Robert	Wolf	Hubbell Power Systems, Inc.			
Guest	Kevin	Wood	Southern California Edison			
Guest	Charles	Worthington	Hubbell Power Systems	X		X
Guest	Sandeep	Zope	Amazon Web Services (AWS)			X