

# **C37.100.1 WG**

## **Common Requirements for HV Power Switchgear Rated Above 1000 V**

### **September 22 & 24, 2015 – San Diego, California USA**

The Working Group for the revision of C37.100.1-2007 held its 8th meeting on September 22 & 24, 2015 in San Diego California. Twenty WG members and 21 guests were present.

Meeting was called to order at 2:00 PM by WG Chairman, David Stone.

Oral Introductions of meeting members followed and attendance sheets were circulated.

The agenda was reviewed and approved. In like manner, the minutes of the previous meeting held in St. Pete Florida were approved.

All attendees were reminded of the process and access requirements to retrieve information from the IEEE document archives at the following URL:

<http://grouper.ieee.org/groups/c37/100/1/private>.

Username and password were shown at the meeting and may be requested by WG members from the Chairman.

#### **WG Membership**

Five new members were added and nine members dropped following the last meeting. Membership stood at 20 regular and 19 corresponding for a total of 39.

#### **PAR Extension**

The working group PAR extension to the end of December 2016 was approved by the IEEE Standards Board.

#### **Results of the 1<sup>st</sup> IEEE Ballot:**

The ballot closed on July 25, 2015:

- 155 ballot group members
- 135 votes received (87% return)
- 30 negative ballots
- 9 abstentions
- 845 comments (400 editorial)

The Chairman had given a preliminary disposition to 74% of the comments leaving 226 open for review by the WG. Chairman emphasized that all comments are subject to review by the WG members.

#### **IEC 62271-1:**

A report on the IEC MT34 activities was given by the Chairman. MT34 circulated its 3<sup>rd</sup> committee draft (CD) for comment. The comment period closed on July 3, 2015 followed by a meeting in Montreal in late July to review the 334 comments received.

The results will be discussed at the next IEC SC17A meeting in Stockholm in December 2015 after which a committee draft for vote (CDV) is expected.

#### **Timeline for IEEE C37.100.1:**

The chairman proposed a timeline for the remainder of the project as follows:

- 1<sup>st</sup> ballot: complete
- Review/resolve 1<sup>st</sup> ballot comments: in progress target end of October
- 2<sup>nd</sup> ballot: 4<sup>th</sup> qtr. 2015
- Resolve 2<sup>nd</sup> ballot comments: April. 2016
- 3<sup>rd</sup> ballot (if req'd) 2<sup>nd</sup> qtr. 2016
- Submit to RevCom: 3rd qtr. 2016

**Review of 1<sup>st</sup> ballot comments –key discussion points:**

- Title: accept comment to change title by adding “alternating current”.
- Agree to add back reference to NEMA C37.85 on x-ray, some modifications will be added.
- 2.1.3: Ice thickness will be retained at 20 mm to harmonize with IEC.
- 2.2.2: Altitude correction factor. IEC has found that altitude correction factors are handled in several different way among its standards. A joint study group is reviewing to come up with a consistent method. In the meantime, IEC 62271-1 plans to retain it’s method with corrections starting at zero at 1000 m. WG C37.100.1 decided to retain its method where corrections start at approximately 1.1 (for m=.75) at 1000 m. Both groups expected to adopt plan of joint study group when decided. WG did not want to subject users to another change.
- Several comment regarding enclosure security (5.14) when publically accessible. It was decided that, for now, this should be covered in the recloser standard or by RODE since most switchgear is enclosed by substation security (fencing)
- 4.2.2: The 15 kV rating will be retained with a note to be determined.
- 4.2.2: Similarly, the 25.8 kV rating will be retained with a note that the 27 kV rating should be used for future designs.
- 5.4: The subclause will be reviewed in total. A proposal will be considered by the WG that is a compromise between “no requirements” in the current edition and the detailed specifications of the IEC standard.
- 5.14.4: Requirements for IK coding will be added.

A proposed disposition for the comments not discussed in the meeting will be prepared by the Chairman for review by the WG. The possibility of a Web conference to go over the comments list was discussed before the 2<sup>nd</sup> ballot is launched.

**Next Actions:** Complete disposition detail for comments and prepare 2<sup>nd</sup> ballot draft for WG review. Request PAR revision to include “AC” or “alternating current” in the title.

**Next meeting:** Week of April 25, 2016 at the Sonesta Resort, Hilton Head, South Carolina.

David Stone, Chairman

September 29, 2015

**Annex A: Attendance: C37.100.1-2007 WG Meeting September 22 and/or 24, 2015**  
**X = present at meeting**

Role	First Name	Last Name	Company	Country	9/22/2015
Chair	David	Stone	DTS Technical Services	USA	X
Member	Chris	Ambrose	Federal Pacific	USA	X
Member	Robert	Behl	ABB	USA	X
Member	Jean-Marc	Biasse	Schneider Electric	France	X
Member	Stan	Billings	Mitsubishi Electric PP	USA	X
Member	Antone	Bonner	Eaton	USA	X
Member	Russell	Boyce	Eaton	USA	X
Member	Gilbert	Carmona	Southern California Edison	USA	X
Member	Frank	DeCesaro	Eaton's Cooper Power Systems	USA	X
Member	Edgar	Dullni	ABB	Germany	X
Member	Donald	Elliott	ABB	USA	X
Member	Lawrence	Farr	Eaton Electrical	USA	
Member	Paul	Found	BC Hydro	Canada	X
Member	Edward	Jankowich	Representing ABB/T&B	USA	X
Member	Hua Ying	Liu	Southern California Edison	USA	X
Member	Alan	Peterson	Utility Service Corporation	USA	
Member	Arnold	Putans	Detroit Edison	USA	
Member	Charles	Ross	PGH Wong Engineering	USA	
Member	Mike	Seabrook	GE	USA	
Member	Devki	Sharma	Consultant	USA	X
Member	Matthew	Williford	Schneider Electric	USA	
Corres Member	W.J. (Bill)	Bergman	PowerNex Associates Inc.	Canada	
Corres Member	Anne	Bosma	ABB AB	Sweden	
Corres Member	Steven	Chen	Eaton Corporation	USA	X
Corres Member	Denis	Dufournet	Retired	France	X
Corres Member	Ken	Edwards	Bonneville Power Administration	USA	
Corres Member	Kenneth	Harless	Pascor Atlantic	USA	X
Corres Member	Harold	Hirz	Thomas and Betts	USA	
Corres Member	Jingxuan (Joanne)	Hu	RBJ Engineering Corporation	Canada	
Corres Member	Albert	Livshitz	CE Power Solutions	USA	
Corres Member	David	McMullen	Southern Company Services	USA	
Corres Member	Peter	Meyer	S&C Electric Company	USA	
Corres Member	Frank	Muench	Cooper Power Systems	USA	
Corres Member	Larry	Putman	Powell Electrical Systems Inc.	USA	
Corres Member	Carl	Reigart	Hubbell Power Systems/USCO	USA	X

Corres Member	Ian	Rokser	Eaton Corp	USA	
Corres Member	Hugh	Ross	Ross Engineering Corporation	USA	
Corres Member	Carl	Schneider	Schneider Electric	USA	
Corres Member	Robert	Smith	Eaton Corporation	USA	
Corres Member	Paul	Sullivan	DuPont	USA	
Corres Member	James	Swank	Cooper Power Systems	USA	
Guest	George	Becker	Electric Power Research Institute	USA	X
Guest	John	Brunke	Dr. John H. Brunke, P.E.	USA	X
Guest	Ted	Burse	Powell Industries, Inc	USA	X
Guest	Jerry	Earl	ABB - Retired	USA	X
Guest	Sergio	Flores	Schneider Electric Inc. USA	USA	X
Guest	Peter	Glaesman	Reuel, Inc.	USA	X
Guest	Sahadev	Gohil	AZZ/Central Electric Mfg. Co.	Other	X
Guest	Travis	Johnson	Xcel Energy	USA	X
Guest	Wolfgang	Jung	Siemens AG	Germany	X
Guest	Jayamali	Kasige	Crown Technical Systems	Canada	X
Guest	Carl	LaPlace	GE Industrial Solutions	USA	X
Guest	Wangpei	Li	Eaton	USA	X
Guest	Alex	Lizardo	ABB	USA	X
Guest	Deepak	Mazumdar	Central Electric Manufacturing Co.	USA	X
Guest	Terry	Neighbours	ABB Inc.	USA	X
Guest	Ahmad	Qasem	Bechtel	USA	X
Guest	Samala Santosh	Reddy	Powell Industries	USA	X
Guest	James	Stacy	Schneider Electric	USA	X
Guest	Chand	Tailor	Eaton Corporation	USA	X