

**Chair:** Dave Stone

## Meeting Minutes

### 1. Call to order and introduction:

The Working Group for the revision of IEC 62271-111/IEEE C37.60-2012 ed. 2 held its 3rd meeting on September 17, 2013 in San Antonio, Texas, USA in conjunction with the IEEE Switchgear meetings. Convener David Stone opened the meeting at 10:15 AM. Antone Bonner acted as secretary for the meeting.

### 2. Roster Check:

Introductions were made. Attendance included 28 members of the Dual Logo Maintenance Team (DLMT) and 14 guests. Five members of the DLMT were absent or excused. Refer to the attendance list at the end of this report. Convener Stone noted the addition of Mr. David Dart as IEC Expert appointed by the Australian National Committee and Mr. Subir Chakraborty as IEC Expert appointed by the French National Committee. Mr. Dart was present at the meeting.

### 3. Previous Meeting Minutes

The agenda was reviewed, followed by a review of the meeting minutes of the C37.60 Galveston meeting held on April 30, 2013, both of which were approved.

The decisions made at the Galveston meetings noted including a) removal of the fault interrupter from the standard, b) continued pursuit of harmonization with IEEE C37.100.1 and IEC 62271-1 (Common Specifications), and c) not to require IAC testing. This last point was to be discussed further, see item b of Other Topics below.

### 4. Meeting Highlights

- **Documents available on IEEE website:** All documents from the DLMT will be posted on the IEEE web site. Members may contact the Convener for the log-in ID and password.
- **Contributions to address IEC comments:** Chairman chose following topics to address during the meeting. The contributions were made and discussion took place.

- 1) First phase to clear factor, kpp: Considerable discussion on this topic. Attempts to obtain information to justify the addition of this test other than the technical analysis have been unsuccessful. In a straw vote, a majority of the members present were in favor of NOT adding this test to the standard.

Chairman will act accordingly with the draft being prepared but will pursue additional information.

- 2) Mechanical and extreme temp. testing: The proposal prepared by C. Lettow and N. Uzelac was approved in principle. Chris will update the proposal based on the discussion.

- 3) Harmonization of the test current levels for line and cable charging: The proposal prepared by C. Heinrich and C. Lettow was reviewed. It was noted that the values for the recloser fall in between those specified in IEC for switches and for circuit breaker. Decision was made to retain the values that have been in the standard for several years.

It was also discovered that the current edition does not include the test voltage values that were formerly referenced from IEEE 1247. This appears to be an oversight of the previous WG.

A third proposal of the Task Team was to make the CLOSE portion of the CLOSE-OPEN duty cycle optional at the discretion of the test lab and manufacture. It was felt that the CLOSE does not add any information to the test. The WG agreed to this proposal.

The Task Team will prepare the proposed revisions covering these three points for inclusion into the draft.

- 4) Clarification of the pass/fail criteria for delayed re-strikes in fault current interruption operations: The proposal prepared by K. Smith, C. Lettow and A. Bonner was reviewed followed by considerable discussion. Several approaches were considered including pass/fail based on final clearing within the published TCC.

The Task Team will revise its proposal based on the WG discussion.

- 5) Harmonization of Specifications for auxiliary and control circuits and Open/Close indication with IEC 62271-1. A. Seccombe's proposal was included in the initial WG draft that was distributed in August. The proposals were accepted by the WG subject to revision based on changes being considered by IEC MT34 (IEC 62271-1).

- 6) Critical current testing: Two proposals were prepared by the Chairman and distributed to the WG in August. In all, four approaches were discussed including do nothing leaving the specifications in edition 2 and deleting the requirement altogether.

After considerable discussion, the WG agreed to the proposal to replace the critical current test with a "low current" test series at T10 and T5 which is the second proposal prepared by the Chairman.

- 7) Contact resistance test protocol: An IEC committee has developed a test protocol for taking contact resistance of the main circuit including proposed acceptance criteria. Once the proposal is finalized in IEC, the Chairman will include it in the next revision draft.

- 8) Simulated surge arrester operation test: A. Bonner reported on the contents of a study for EPRI. The WG had decided at its last meeting that the existing criterion of 6 kA is sufficient for this test. A suggestion to offer two levels for test (two classes) was discussed and the WG felt that a higher level of 10 kA crest should be considered as a special case to be agreed upon between the User and the manufacturer. The Chairman will add a note to this effect.

However, the Chairman and A. Bonner will pursue a review of other details of the test protocol.

- 9) Application Section of standard: No action has been taken on the proposal to add/expand the application annex. This item will not be considered any further.

- Other topics:
  - a. TCC clause 6.108

The TCC specifications have come into question. Suggested changes proposed by C. Sasse and M. Feltis will be reviewed by a Task Team of C. Sasse, M. Feltis, H. Bannink, C. Heinrich and A. Bonner.

- b. Internal arc classification (IAC): A proposal that a recloser class be added for internal arc classification. It was agreed that the reference to IEC 62271-200 and IEEE C37.20.7 will be changed from “should” to “shall”.

**5. Next meeting:**

Spring 2014: May 6, 2014 - Disney Contemporary Hotel, Orlando, FL USA

**6. Meeting was adjourned at 5:45 PM**

**Meeting Attendance**

X = present at meeting; (N) new member

Role	First Name	Last Name	Company	Country	09/17/13
Member (N)	Peter	Agliata	Hubbell Power Systems	USA	X
Member	Chris	Ambrose	Federal Pacific	USA	X
Member	Herman	Bannink	KEMA Netherlands	Netherlands	X
Member	Robert	Behl	ABB	USA	X
Member	Antone	Bonner	Eaton	USA	X
Member	Eldridge	Byron	Schneider Electric	USA	X
Member (N)	Subir	Chakraborty	Schneider Electric Inc.	France	excused
Member (N)	David	Dart	NOJAPower	Australia	X
Member	Frank	DeCesaro	Cooper Power Systems	USA	X
Member (N)	Edgar	Dullni	ABB	Germany	X
Member	Leslie	Falkingham	Vacuum Interrupters Limited	UK	X
Member	Lawrence	Farr	Eaton Electrical	USA	X
Member	Mark	Feltis	Schweitzer Engineering Labs	USA	X
Member	Paul	Found	BC Hydro	Canada	X
Member	Jeffrey	Gieger	Thomas & Betts	USA	X
Member	William	Glennon	Schweitzer Engineering Labs	USA	X
Member	Christian	Heinrich	Siemens AG	Germany	X
Member (N)	Harold	Hirz	Thomas and Betts	USA	X
Member	Edward	Jankowich	Jankowich Consulting LLC	USA	X
Member	Chris	Lettow	S&C Electric Company	USA	X
Member (N)	Wangpei	Li	Eaton	USA	X
Member (N)	Larry	Putman	Powell Electrical Systems Inc.	USA	X
Member (N)	Timothy	Royster	Dominion Virginia Power	USA	X
Member	Christian	Sasse	Tavrda Electric NA Inc	Canada	X
Member	Andy	Seccombe	Schneider Electric	Australia	X
Member	Robert	Smith	Eaton Corporation	USA	X
Member	Francois	Soulard	Hydro-Quebec	Canada	X
Member	Tom	Stefanski	Powertech Labs Inc	Canada	X
Chair	David	Stone	DTS Technical Services	USA	X
Member	James	Swank	Cooper Power Systems	USA	X
Member	Nenad	Uzelac	G&W Electric	USA	excused
Member	William	Walter	We-Energies	USA	absent
Corres. Member	Jan	Zawadzki	None	Canada	absent
Guest	Jerry	Baskin	Federal Pacific	USA	X
Guest	Jonathan	Deverick	Dominion Power	USA	X
Guest	Sergio	Flores	Schneider Electric Inc. USA	USA	X
Guest	Peter	Glaesman	Reuel, Inc.	USA	X
Guest	Reid	Herzog	OG&E	USA	X
Guest	Michael	LaBianco	G&W Electric Company	USA	X

Guest	Kenneth	Lee	Thomas & Betts Corporation	USA	X
Guest	Paul	Leufkens	KEMA-Powertest	USA	X
Guest	Donald	Martin	G&W Electric Co.	USA	X
Guest	Steven	Meiners	GE	USA	X
Guest	Joachim	Oemisch	Siemens AG	Germany	X
Guest	Ben	Rosenkrans	Eaton Corporation	USA	X
Guest	Andrew	Swisher	Southern California Edison	USA	X

Submitted by:

David T. Stone  
Working Group Chairperson, C37.60 and Convenor for IEC MT47  
Reclosers and Other Distribution Switchgear Subcommittee

September 24, 2013