

**IEEE Working Group D-7  
IEEE Annual Substation Meeting  
Raleigh NC Meeting Minutes (May 22, 2012)**

**Summary**

The working meeting of Working Group D-7 was held in Raleigh, NC. There were 21 members and 29 guests in attendance.

**Members in Attendance**

Bryan Beske	Dale Boling	Bill Carman	K. S. Chan
Dennis DeCosta	Marcia Eblen	Steve Greenfield	D. Lane Garrett
Dave Kelly	Rich Keil	Henri Lemeilleur	Cary Mans
Shashi Patel	Jesse Rorabaugh	Will Sheh	Doug Smith
Curtis Stidham	Greg Steinman	Brian Story	CeCe Syarif
Brian Wallace			

**Guests in Attendance:**

Charles Haahr**	Bob Nowell	Jorge Cardenas**	Eugene Dick**
Mike Eads	Keith Graham**	Thomas Harger**	Cris Kramschuster**
Donald Rogers	David Stamm	Ryan Stargel	Don Wengerter
Bob Hobbs	Pathik Patel**	J.K. Smalls	Toby Reid
Reggie Maniego**	Christian Robles**	Josh Winston**	William Shannon
Dean Gause	Erin Spiewak	Andrew Meikle**	Eric Broden
Tom Proios**	Alan Beith	Byron Johnson	DJ Moren**
Kenneth Strahl			

\*\* Requested membership status

The meeting began with introductions. An attendance list was passed around the room. The obligatory IEEE Slides were shown. Rich Keil gave a brief update of the proceedings from the previous meeting and the minutes were approved.

**Standard 80**

By the end of the meeting Rich wants to have a census on the draft so as to be ready to send the standard to the Technical Editor and IEEE Legal and setup balloting pool with SA.

From the last meeting we decided to correlate definitions with Std81, step & touch voltage, ground grid in Std81, and grounding grid in Std80. Rich did a search in Std.80 and found both ground grid and grounding grid. Rich decided we should look at changing the use of grounding grid over to ground grid in the standard. Dennis is working to help harmonize Std.81 definitions with Std80. Greg Steinman made a motion and Will Sheh seconded, vote passed to use ground grid within the standard.

**Clause 10 (Special considerations for GIS)**

Substation's K0 subcommittee reviewed Clause 10. They did not have many comments but they did want to add a footnote on transient enclosure voltages (TEV). Rich decided to add a sentence within the body of the text on transient enclosure voltage instead of adding it as a footnote. The following sentence was added to the body of the text; "The direct effects of TEV on humans may not be fatal, but the effects on humans should be a concern to the designer and manufacturer."

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**Clause 11 (Selection of conductors and connections)**

Since the October meeting a second example has been added on composite metal. The first example presented at the October meeting was for a 5/8 cu-clad steel rod (10 mil cu) and a second example has been added for a 40% conductivity copper coated steel conductor. It includes resistivity and thermal capacity. This work has been conducted by Jesse Rorabaugh and CeCe Syarif. Jesse noted that the analysis must be based on the melting temperature of the lower fusing temperature metal but most manufacturers provide data based on the higher melting temperature metal. Jesse recommends a note that describes this be added under Table 1. “e). Bi-metallic materials fusing temperature based on metal with lower fusing temperature.”

With the changes made in this meeting Rich is going to send to IEEE Standards. If anyone sees any errors in the near term please provide them to Rich as soon as possible. IEEE will be setting up a balloting pool. We can expect to be getting a number of comments back. Rich wants to setup a balloting reconciliation committee to go through and deal with the editorial comments that can be expected. The technical issues will be brought to the WG.

The following have volunteered to be part of the Balloting Reconciliation Committee: Steve Greenfield, Jesse Rorabaugh, Keith Wallace, Brian Story, Rich Keil, and Curt Stidham.

Rich asked for and received an extension of the PAR to Dec 2013. By the end of this week of this meeting Rich will be sending Std80 to IEEE Standards and get the balloting pool established. The balloting pool will be established within 30 days. Ballot must occur within six months of establishing the pool. The ballot will be open for 30 days. Rich hopes to have responses back by the October meeting.

Lane Garrett asked to see if we were going to have an internal WG ballot. Rich said that we do need to have a WG ballot. Chuck Haahr says that we can use Adobe balloting to capture the WG ballots. Curt Stidham will establish the on-line ballot. Rich has recommended that the WG members do a final review and provide any changes to Rich within two follows this meeting so that he can incorporate before sending out for a WG ballot. Following the official WG ballot Rich will send to IEEE Standards. Rich will post the Word file of the document and send an email to the WG to notify of the two week review period.

Peter Dick brought up the issue that the standard is not really helpful in the evaluation of ground grids with two layer soils. For future revisions Peter has recommended a couple of references to be included in the future.

Next meeting October 8-11 2012 in Nashville at the Holiday Inn Opryland/Airport.

Curt Stidham  
D-7 Secretary