

Meeting Minutes
IEEE Traction Power Substation Standards Sub-committee Meeting
on January 20 and 21, 2009 at TECO Line Streetcar System
Tampa, FL

the group; Benjamin will email the final "wordsmithed" versions of the responses to the group for comment before submitting them to the IEEE for ballot recirculation. Tom Young and David Groves volunteered to provide additional response language regarding acceptable alternatives for rectifier dielectric testing power sources.

Traction Power DC Switchgear

David Groves/Mark Griffiths

C37.14 and C37.20.8 are still under the PES Switchgear control. David Groves and Mark Griffiths will be vice chairs, Ted Burse will be the chair. The TPSCC group will be the working group that writes the new standards.

The new Standards will be:

- C37.14.1 LV DC General Purpose Circuit Breakers
- C37.14.2 Traction DC Circuit Breakers
- C37.20.8 DC Switchgear

WG 28 - Traction Power Modeling

Mike Dinolfo/Mark Pfeiffer

1. Equations (e.g., for Davis terms, tractive effort, etc) to be added (or referenced, if found to be already published). Perhaps will be entered in annex(es). Action by Mark Griffiths and Mike Dinolfo.
2. The current section 4 (modeling, and analysis) to be broken up into two separate sections: new section 4 (modeling and validation) and new section 5 (analysis). Action by Mike Dinolfo to revise table of contents, and provide initial restructuring of the "body" of the text.
3. Scope must be modified to match PAR exactly (this will involve movement of the second and third paragraphs of 1.1 Scope to a new subparagraph 1.1.1 "Limitations") Action by Mike Dinolfo. Also, Purpose must be modified to match PAR exactly.
4. Steve Bezner has provided up-to-date language regarding patent restrictions to Mike Dinolfo; Mike Dinolfo will incorporate into the draft.
5. "Introduction" (currently paragraph 4.1) to modeling and/or analysis descriptions to be developed further by Roger Avery. Perhaps to also include description/qualifications related to DC vs AC systems (see item 10 below).
6. "DC Fault Analysis" (currently paragraph 4.4) to be modified by Andy Jones and Chuck Ross. A graph of fault current vs. time (simplified version of the graph from C37.14) will be incorporated. Action by Don Kline and Tom Young to provide actual oscillographs as possible data source for the graph. Description to be added to indicate that maximum energy (not just ampere levels) to be interrupted by devices is an issue and needs to be estimated or otherwise accounted for.
7. "Substation Rating, Spacing, and Placement" (currently paragraph 4.8) to be modified by Alan Blatchford.

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8. "Input Parameters" (currently paragraph 5.1) to be expanded by Mark Pfeiffer, Tristan Kneschke, Mike Dinolfo, Andy Jones, Mark Griffiths, Steve Bezner.
9. "Grounding Analysis" (currently paragraph 4.7) is to be placed "on hold" pending development of guide under the 1653.6 "Grounding" working group.
10. Additional clarifications and references will be appropriate in the document to distinguish between sections and text that apply to both AC and DC traction power systems, vs. sections/text that apply to "DC traction power systems only." Perhaps there will ultimately be some disclaimer that this guide is for DC systems only (although the intent so far has been to develop a document that applies to both AC and DC systems.)
11. Consideration of economic impact of design requirements to be included (e.g., impact of minor excursion below low voltage limit on runtime).

Dinner at Bernini's in Ybor City

Sponsored by Powell

Wednesday, January 21, 2009

PAR - Grounding in Traction Power Substations **Ethan Kim/Paul Forquer**

- PAR was submitted on 1/5/09 and is pending approval by Jim Dietz and NesCom. The next meeting for NesCom is in March 2009.
- Reviewed the content in Section 4.0 regarding System Grounding. Committee decided that the document focused too much on rail and not enough on trolley bus systems. Section 4.0 will have sub categories to address all the different Traction Power systems.
- Reconfirmed volunteers for sections in the document.
- Paul Forquer raised concern about the document going way out of scope with corrosion, wayside equipment grounding, safety etc. The current consensus is to document the current practices for grounding and then cut portions of document later.

Assignments

Section	Description		Updated
1	Overview	Ethan K.	1/5/2009
2	References	Ethan K.	
3	Definitions	Ethan K.	
4	System Grouning	Mike D., Andy J.	1/9/2009

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		Bill	
5	Equipment Grounding and Bonding	Tom Young	
6	Surge Arrester Connections	Dev P.	
7	Negative Drainage Circuits	Jeftic M.	
8	Separation of Ac and Dc Ground Grids	Chuck R.	
9	Isolation of Control Circuits	Paul F.	
10	Shielded Wire Grounding	Ed R.	
11	Track to ground Voltage	Ed R., Jeftic M.	
		Ben S., Jean-Luc	
12	Negative Grounding Devices	A.	
13	Dc Stray Current and Grounding	Ben S.	
14	Signal, Control, and Communication Isolation	David Groves	
15	Ac Utility Interface	Roger Avery	March
16	Insulated Floor Requirements	Paul Forquer	
17	Wall Insulation Requirements	Paul Forquer	
18	Clearances around Ungrounded Equipment	Paul Forquer	
19	Prefabricated Traction Power Substations	Ed R., Paul F.	

Annex A

**Key
Dates**

1/1/2011	Initial Submittal for Sponsor Ballot
	Projected Completion Date and Submittal to
1/1/2012	NesCom

Progress Notes

10/8/2008	Modified PAR Scope and Purpose	WG Jim
1/5/2009	Submitted PAR online for approval	Dietz/NesCom
	Draft copy of Grounding PAR distributed for	
1/15/2009	meeting	

PAR - Controlled Traction Power Rectifiers (Thyristors). Ray Strittmatter/Louie Luo

TPSS System Tour All

Adjourn the second day meeting Gary Touryan

Thanks to the Breakfast and Lunch sponsors:

Systra	PGH Wong	Parsons Brinckerhoff	SMC Electrical
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