IEEE Power Engineering Society Switchgear Committee C37.20.2 Working Group Report 15-October-2007

The working group met on Monday, October 15, at 1:40PM. This is the third meeting of the working group.

## Patents:

IEEE-SA rules on Patents were reviewed prior to further discussions. The introductory slide, and slides #1 through #5 of the IEEE-SA Patents Slide Set dated 1-May-2007 were shown. The WG attendees were advised:

- The IEEE's patent policy is consistent with the ANSI patent policy and is described in Clause 6 of the IEEE-SA Standards Board Bylaws;
- Early identification of patent claims which may be essential for the use of standards under development is encouraged;
- There may be Essential Patent Claims of which the IEEE is not aware. Additionally, neither the IEEE, the WG, nor the WG chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.

The participants were provided an opportunity to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for the use of the standard which will result from the activity of the WG.

No responses were received during the meeting regarding patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.

## General:

A PAR for this project needs to be submitted for approval by IEEE-SA. This will be done early in 2008.

Attendance included 13 WG (of 19) members and 23 guests. During introductions, those in attendace indicated their affiliation. Attendance is as shown below:

Members	Members	Guests	Guests	Guests
P. Barnhart (E)	A. Morgan (P)	H. Bannick (P)	R. Karmbach (P)	I. Profir (P)
E. Byron (P)	T. Olsen (P)	K. Boadi-Boateng(P)	C. Kennedy (P)	R. Sarin (P)
V. Coletta (A)	M Orosz (P)	T. Burse (A)	K. Goldstein (A)	D. Smith (P)
R. Cubbage (A)	R. Puckett (P)	L. Conner (P)	S. LaPidus (P)	P. Sullivan (A)
P. Dwyer (P)	C. Schneider (A)	D. Edwards (A)	D. Lemmerman (P)	J. Toney (P)
L. Farr (P)	J. Smith (P)	T. Fink (P)	A. Livshitz (P)	B. Walton (P)
D. Gohil (É)	A. Storms (P)	M. Flack (P)	N. McQuin (É)	J. Webb (P)
R. Hartzel (P)	C. Tailor (E)	D. Giraud (P)	T. Meeks (A)	T. Williams (P)
F. Mayle (P)	M. Wactor (P)	H. Josten (A)	C. Morris (P)	J. Wiseman (A)
D. Mazumdar (P)		H. Karandikar (P)	A. Patel (P)	L. Yonce (P)
			D. Pearson (P)	. ,

P = present, E = excused, A = absent

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No comments were received on the minutes distributed on the previous meeting, so they are considered approved.

In previous meetings, two task forces were assigned:

- Task force 1: Seismic (R. Hartzel, T. Olsen, E. Byron, D. Lemmerman, C. Ball, M. Wactor). R. Hartzel prepared background material on seismic.
- Task force 2: Flame testing (T. Olsen, J. Smith, A. Storms, M. Orosz, P. Barnhart, C. Ball, M. Wactor). No activity to this point. Progress is promised before the next meeting. From earlier minutes:
  - 6.2.7.1 covers flame resistance tests. C37.55 provides guidance for substitution of materials, but allows different requirements for the substitute materials. C37.55 allows 94V0 flame resistance, quite different from the requirement in C37.20.2. We need to address proper requirements and both C37.20.2 and C37.55 should agree. If 94V0 is sufficient for substitution, why isn't it acceptable in the first instance? Is 94V0 sufficient? UL 94V0 is based loosely on ASTM 4804. This issue affects a wider group than just C37.20.2. It is requested that the Switchgear Assemblies subcommittee appoint a task force to study this issue.

The WG reaffirmed the desire to revise to reflect C37.100.1 (common clauses). The entire document must be reviewed. Responsibility for reviewing specific clauses was assigned as follows. All interested parties are invited to submit comments or suggestions for any clauses, not restricted by the responsibilities shown below:

Clause	Subject	Responsible	
1	General	M. Wactor	
2	References	M. Wactor	
3	Definitions	C. Schneider	
		A. Storms	
4	Ratings	T. Olsen	
5.3	Grounding	M. Wactor	
5.4	Control and secondary circuits	C. Tailor	
		D. Edwards	
5.10	Markings	T. Olsen	
5.11 -5.19	Interlocks to X-Ray	T. Olsen	
5.101-5.109	Internal fault to test cabinet	J. Smith	
5.102.3.1	Barriers	D. Mazumdar	
6.2-6.2.101	Dielectric	M. Wactor	
6.3-6.5	Temperature rise	T. Olsen	
6.6	Short-circuit	R. Puckett	
6.7-6.9	Degree of protection to EMC	A. Storms	
6.100	Auxiliary	T. Olsen	
		M. Wactor	
6.101	Mechanical endurance	P. Dwyer	
6.102	Flame-resistance and track resistance	M. Orosz	
6.103	Flame resistant tests for applied insulation	J. Smith	
6.104	Coating test	M. Orosz	
6.105	Rain test	D. Gohil	
7	Production tests	C. Schneider	
8.1	Unusual service conditions	D. Gohil	
8.1.4.6	Seismic	R. Hartzel	
8.2-8.3	System voltage and insulation	M. Wactor	
8.4	Current	A. Storms	
8.5 - 8.8	Short-circuit to protection and isolation	T. Olsen	
10	Installation	A. Morgan	
Α	Enclosure	A. Morgan	
В	Bibliography	T. Olsen	
added	Partial discharge	J. Smith	

Comments submitted by R. Puckett were reviewed.

- D. Lemmerman will propose modification to table 3 to reflect aluminum cable connections to switchgear.
- Question temperature limit (65 °C) in clause 5.5.4 for air surrounding cable terminations, and potential conflict with IEEE 48 limit (55 °C).
- Discussion of temperature limits in clauses 5.5.6 for parts accessible to operator. Further study is required, including ASTM C 1055-03. M. Orosz will research further.
- Current transformer requirements (5.7 and 8.7.1) must be further discussed.
- Clause 6.2 (last paragraph) discussion of where voltage source is connected for auxiliary section. M. Wactor will propose new language.
- Clause 7.10 consider adding requirement for provisions for locking shutters in closed position, in circuit breaker compartments, as item g
- Clause 8.4, item b) T. Olsen to propose new language.

Comments submitted by E. Byron were reviewed.

- Agreed to revise to specify minimum thickness of sheet steel. Values open to discussion.
- Corrosion protection discussed proposal to accept protective coatings other than paint.

Due to time constraints, the following discussion items from earlier meetings were not discussed in this meeting. They are repeated in these minutes for future reference.

- Several sections discuss "no intentional openings" (e.g., 3.1.6.b, 7.7, and D.6). It is agreed is that this statement is not sufficiently descriptive and that modification of the language is needed. Mr. Mazumdar presented proposal for clause 7.7 for consideration. Further discussion required.
- MOC switches. At least one user would like the standard to specify that MOC switches shall be operable only in the "connected" position as standard, and that they may be operated in the test position on request of the purchaser.

All those who accepted assignments are requested to provide their input by November 15.

The chair will provide a new draft for consideration approximately December 15.

The meeting adjourned at 5:35PM.

Report submitted by:

M. Wactor, WG Chair