IEEE Power Engineering Society
Switchgear Committee
C37.20.7 Working Group Report
20-Sept-2004

The working group met on Sept. 20, 2004 to review D5 of the revision to C37.20.7, and the comments received to date. Attendance included 12 WG members and 9 guests. Working group members are:

C. Ball	D. Lemmerman	T. Olsen (Vice Chair)	J. E. Smith
P. Barnhart	D. Mazumdar	M. Orosz	M. Wactor (Chair)
E. Byron	T. McNamara	P. Puckett	J. Zawadzki
P. Dwyer			

IEEE-SA Standards Board approved the PAR for revision of C37.20.7 on March 25, 2004.

D5 had been circulated with the E-Mail of Sept. 10, 2004 for comment among the working group members and a number of other interested persons. D5 included all comments received to that point, and included input from CSA.

IEEE-SA rules on Patents were reviewed prior to further discussions.

D5 and comments received were reviewed. Issues of significance discussed:

- Suffixes for the various types were modified to prevent use of the same letter designation for two different meanings.
- 5.1.1.3.f was revised to clarify the requirement for connection between the test specimen grounding means and the supply system neutral.
- 5.1.1.6 specifies the length of exhaust ducts. After considerable discussion, it was agreed that the duct outlet must be at least 2m beyond the perimeter of the switchgear (for horizontal ducts), and the duct outlet must be at least 2m above the connection to the switchgear (for vertical ducts). One person objected to the 2m restriction, but discussion was deferred.
- 5.1.3 was modified to specify that separate tests are required if equipment is offered with uninsulated bus and as an option, with insulated bus.
- 5.2.3 was discussed at length. WG members and guests were requested to send recommended wording to the chair by no later than October 4, 2004.
- Rating labels for fuse-protected or device-limited compartments were discussed. It was agreed that such compartments be rated for the arcing duration of an upstream compartment, provided that a conditional nameplate is provided. For example, a fuse-protected compartment can have a rated arcing duration of 0.5s provided that the upstream compartment (not fuse-protected) has met the requirements for a rated arcing duration of 0.5s. This affects several clauses, including 6.3 and 5.2.5.
- Arc-flash calculations (IEEE 1584) are based on the incident energy, whereas internal arcing tests use black cotton indicators that may require more energy to ignite. The correlation between the incident energy in arc-flash calculations and the flammability of indicators needs to be studied. At a minimum, the document should state minimum levels of PPE that are necessary even if equipment tested for internal arcing.

A number of verbal requests have been made to extend the scope to encompass extension to low voltage products, including low-voltage metal-enclosed switchgear. UL has been asked to witness internal arcing tests for other equipment and would like to have an objective standard for conducting such tests. In addition, other entities of IEEE have expressed interest in development of requirements for testing of other kinds of equipment, particularly low-voltage equipment. It was agreed that a revised PAR to include low-voltage metal-enclosed ac power circuit breaker switchgear would be submitted September 21 for consideration by the IEEE-SA Standards Board.

Future schedule:

- Input from participants due October 4, 2004
- Comments will be collated and disseminated in late October.
- D6 with changes discussed at this meeting will be sent in late October.

Report submitted by: M. Wactor, WG Chair