IEEE Power Engineering Society
Switchgear Committee
C37.20.7 Working Group Report
October 9-10, 2000

The working group met on October 9 and 10, 2000 to review comments received on IEEE-SA ballots for Draft 14. The due date for the ballots was September 25, and because of this, ASC C37 ballot comments are not yet available. The October 9 meeting was attended by 6 WG members and 16 guests, while the October 10 meeting was attended by 4 WG members and 14 guests.

Significant points of discussion:

- Minor editorial changes will be incorporated.
- A requirement will be added to clause 7.3 to advise the user of installation considerations which must be met to preserve the arc resistant integrity of the equipment.
- The exemption for testing of the load side of current limiting fuses will be removed.
- Clause 5.1.1.9 was refined so as not to require testing of equivalent bus configurations which differ only in the size of the bus bars (e.g., 1200A, 2000A, and 3000A variations of essentially the same bus configuration).
- The recommendation that multiple tests should be conducted for circuit breakers was removed.
- Mr. Swindler's comments with respect to other techniques to deal with the potential for arcing faults engendered considerable discussion. Mr. Swindler will prepare draft language addressing his concerns for submittal to the WG.
- Mr. Swindler moved that a working group be formed to prepare a guide for mitigation strategies for dealing with arcing faults. The motion passed. This motion will be submitted to the Switchgear Assemblies subcommittee.
- Mr. Telander's comment that Type 3 accessibility should be removed was discussed at length. The conclusion of the WG was that type 3 construction is a common requirement of the historic EEMAC document, and that there is a valid need to adequately define the testing requirements for this accessibility type.
- Mr. Laubach objected to the use of prospective current (clause 4.2). After considerable discussion of the applicable standards and the precedents in IEC 60298 and EEMAC G14-1, it was decided to retain the use of prospective current.
- The preferred arc duration was discussed at length, with the consensus being to maintain the present preferred arc duration of 0.5 seconds. The WG maintains that use of arc resistant construction features needs to be coordinated with use of appropriate measures to reduce the duration of arcing faults, such as those discussed in clause 7.2.1 and in the Introduction.
- Clause 5.2.4 requires testing at rated frequency if the arc duration is 50ms or less. For arc duration greater than 50ms, the clause allows qualification for both 50Hz and 60Hz by testing at either frequency. Information received earlier from IREQ indicates that the energy involved can differ by up to 20% for very short arc durations, but will be within 2% for arc durations of more than 50ms. Therefore, the requirement will remain as written.

The draft will be revised to reflect the discussions and decisions made during the meeting. ASC C37 ballot comments have not been received, but it is believed that most of the comments have been anticipated by the comments received with the IEEE-SA ballots. If additional comments are received from the ASC C37 balloting, the comments will be circulated to the WG. The intent is to resolve these negatives and submit a recirculation ballot on an expedited basis.

Report submitted by: M. Wactor
WG Chair