

Task Force on Standardizing Test Reporting for LV Power Circuit Breakers

Chair: Jeff Mizener, Siemens Industry, Inc.

Agenda

- 1) Introductions
- 2) Presentation of Typical Reports
- 3) Discussion of What Test Reports Should be and Contain
- 4) Assignment of Further Work (if any)
- 5) Adjourn

The meeting was called to order at 8am and adjourned at 9:20am

Notes:

9 attendees + chairman (9 manufacturers, 1 user)

The consensus is that there is most likely a need for something like this but users should be polled, perhaps through IEEE (PCIC & IAS) to determine what the needs, wants and gaps are.

From the standpoint of the manufacturer, it is clear that some of the things being tested in the field today are either being done so incorrectly (perhaps out of a lack of understanding by the test technician) or unnecessarily. None of the manufacturers present specify insulation resistance or minimum or maximum contact resistance, although these quantities are called out on test forms such as those used by NETA member companies. One of those present made an effort to become involved in NETA but was rebuffed.

The one user (retired) present recalled that his company had to make up test forms for all of the different manufacturers' breakers his company used. Standardizing would eliminate this, although it may be difficult given the different methods of setting methods in use.

There is a perceived need, at least among manufacturers, to reign in some of the testing, in particular the primary injection testing, for two reasons:

- 1) The damage caused by inexperienced and incautious test technicians to primary disconnects and bus stabs, unnecessary costs and customer aggravation caused by incorrectly tested breakers;
- 2) The time and expense of going beyond verifying the signal and processing path from the sensor through the trip unit (metering the correct current on the correct phase?) to the trip solenoid (can the trip unit trip the breaker?). The assumption being that the software is not a variable, does not age or drift and will always respond in the same way to the same inputs (determinism).

At the very least, it seemed to many that there was really no good reason to test a 5000A breaker at 3x its rating anywhere but in the lab.

Next steps:

Those in attendance will poll their service organizations and see what reporting forms are being used as well as what gaps they see.

Check with PCIC and IAS to determine whether there are any activities in this direction or if there is a latent need for this sort of document.

Is there something in C37.10 (IEEE Guide for Investigation, Analysis, and Reporting of Power Circuit Breaker Failures) that is helpful? What can be learned from IEEE 1458?

Consider whether this effort really needs to be directed towards creating a parallel standard to NEMA AB-4 for LV PCBs.