10.5 C57.13 Instrument Transformers – J. Smith - Unapproved Minutes

The Subcommittee met on March 16.
6 members and 9 guests attended

10.5.1.1 Chair's Remarks & Announcements:

The Chair asked the attendees if they were aware of any patent issues as required by the new IEEE policy. There were none.

The previous meeting minutes were approved as written

The minutes of this meeting are to be submitted by June 20

10.5.2 Working Group Reports:

10.5.2.1 WG C57.13.5 - Working Group on Test Requirements for High Voltage Instrument Transformers 115 kV Nominal System Voltage and above

The WG met on March 15, 2005. Eight members and seven guests attended the meeting. Two guests requested membership. The meeting was co-chaired by Mr. P. Riffon and Mr. R. McTaggart.

The agenda was approved as written.

Minutes of the Las Vegas meeting were approved as written.

The IEEE patent disclosure requirement policy was discussed. Reference to the package posted on the IEEE Transformers Committee home page was made. None of the members and guests present during the meeting were aware of any patents related to the work of the WG.

The Trial-Use Standard C57.13.5 has been published by IEEE in August 2003. No feedbacks have been received yet on the use of C57.13.5. It appears that this document is again still too young to get feedbacks. None of the manufacturer representatives present during the meeting have used this document yet on actual orders.

A survey on Annex H (current transformers used as unbalance current protection of capacitor banks) and on clause 4.5 (Temperature rise of terminals) have been circulated on November 15, 2004 within the WG membership and within the Instrument Transformers Subcommittee membership. The response was very poor, only 3 responses have been received. The WG co-chair did ask the membership to respond to such survey because it is the only way the get things going forward. It is the responsibility of the WG and SC membership to respond to such surveys.

The comments received were mainly editorial and were reviewed. Revised versions of Annex H and clause 4.5 taking into account the comments received have been presented. In addition to the editorial corrections, the following has been agreed upon:

- A note will be added in Annex H saying that an inductance measurement of the primary winding in the saturated mode may be performed in order to calculate the resulting voltage across the primary winding for adjusting the protective level of the voltage protective device.

- Annex H will be send to the IEEE WG chair responsible of shunt capacitor bank standards for comments.

- An explanatory note will be added to clause 4.5 to better define the term "terminals".

The two revised documents will be surveyed within the WG and SC membership. The deadline for response will be set to one month and a reminder Email will be send to the WG and SC memberships one week prior to the deadline. With such reminder, it is anticipated that the response will be more significant.

A first draft of Annex I related to gapped core CTs having transient performance requirements has been presented and discussed. A possible reference to IEC 60044-1,2003 has been discussed. The WG co-chair will look if it is applicable and if such, reference to both IEC 60044-1 and IEC 60044-6 will be made. This Annex will also be surveyed within the WG and SC membership.

A PAR needs to be issue and approved prior to the next meeting. The PAR will be send to IEEE in the next few weeks.

On the New Business, Joe Ma requested to add a note in clause 8.4 of C57.13.5 explaining why some tests need to be performed on tapped portions of the CT winding. After discussion, such a note will be added and a first draft will be circulated prior to the next meeting for comments and discussion.

10.5.2.2 WG C57.13.6 – Working Group on Instrument Transformers for use with Electronic Meters and Relays – Chris TenHaagen

Chair's remarks & Announcements:

The subcommittee met on *March 15. 2005* with four members and five guests present.
The Chair asked the attendees if they were aware of any patent issues as required by the new IEEE policy. There were none.

Old business

Results of C57.13.6 D3 Recirculation:
Pool closed February 12. 2005
Ballot met 75°/a retuned requirement (91% returned)
82 Eligible people in-group
69 affirmative
2 negative*
4 abstention votes

The 75% affirmation requirement was met (97% affirmative)
* Note: 2 negative were carried forward because balloters did not reverse vote from D2. Therefore, 71 votes were affirmative, or 100% acceptance.

New Business:

Review and discuss ballots with **comments:**

1) James Frysinger, Vice Chair SCC14

Style and usage suggestions repeated from (not addressed) from regarding SI use of quantities vs units. Specifically, Table 2 heading "Volt Amperes" (an SI unit) should be change to Total Power (a quantity).

Chair adopted suggested best practice.. Will recommend WG not recirculate this style improvement.

- Meaning of footnote in Table 2 unclear.

  Chair corrected awkward wording and will review with WG. Will recommend WG not recirculate this style improvement.

2) Ted W. Olsen, Siemens Power

- Meaning of footnote in Table 2 unclear

  Accepted, same correction as above.

Other

A proposal for WG consideration came from Dave Lildinson of the Ontario Independent Electricity Operator (IESO). which is also pursuing these ideas with the Canadian Standards Administration. The chair offered to review with WG and share comments regarding future coordination.

10.5.2.3 Working Group on C57.13 Revision – Tom Nelson

The Working Group met on March 15, 2005. The chairman, Tom Nelson, was absent and Chris TenHaagen chaired the meeting in his absence. There were 6 members and 7 guests at the meeting. The patent disclosure was reviewed.

The Working Group discussed the test methods proposed in the revised version of C57.13 that is being prepared for balloting.

The Working Group reviewed the IEC Standard 60270-2000 on the test equipment calibration and requested that the C57.13 Subcommittee Chair obtain a copy of the latest reversion for the Working Group to review and determine if it is appropriate for US application.

10.5.2.4 Joint PSIM/Transformer Working Group - PAR P1601 Optical Current and Voltage Sensing Systems

Session co-chaired by: Harley Gilleland and Farnoosh Rahmatian (TC/ITSC)
Attendees: M.J. Lee (G), P. Zhao (M), M. Haas (G), M. Rajadhyaksha (G), L-E Juhlin (G), C. Burns (G), R. Gomez (G), J-N Berube (G), K. Yule (G), L. Davis (M), R. McTaggart (M), Paul Millward (M), J. Smith (M), F. Costa (G)

- IEEE disclosure requirements regarding patent issues related to the WG work were presented
  - Mr. Rahmatian asked if anyone is aware of patents relating to the content of PAR 1601 work. There were no responses. It was noted that no patent or IP was disclosed or identified as relevant to P1601 work.

- Minutes of previous P1601 meeting at Transformers Committee meeting, October 25, 2004, Las Vegas were reviewed and approved.
- PAR status and timetable were reviewed
    - Scheduled completion date: December 2005
    - Extending the completion date the PAR P1601: need to make decision in June 2005 if needed.
    - Scheduled P1601 Meetings:
        - June 12-16, 2005, San Francisco, IEEE/PES General Mtg. *
        - October 2005, TC, Memphis, TN
    - Target the June 2005 meeting as the meeting to
        - start final balloting
        - make decision on extension of the completion date
- Brief update on other standards activities were given by F. Rahmatian and H. Gilleland:
    - UCA Guide for using IEC 61850-9-2 (digital interface to instrument transformers)
    - PSRC ITF4 for Optical Sensor System Guide for Relaying. Moving to establishing Working Group.
    - CSA series (Canadian Standards)
    - CIGRE WG A3.15
- Text of a preliminary draft was reviewed.
    - Preliminary draft to be posted on the Transformer Committee website by March 25, 2005, for broader feedback
    - Preliminary comments on that draft are due before May 10, 2005
    - A revised draft will be available for general comments by June 1, 2005
    - Revised draft to be discussed, in details, at the next meeting in June 2005
- Next Scheduled Working Group Meetings
    - IEEE/PES General Meeting, June 12-16, 2005, San Francisco.

10.5.3 Old Business

10.5.3.1 Partial Discharge Requirements

The discussion in WG C57.13 on the subject of adding PD testing was reviewed and continued. It was suggested that we adopt IEC 60270 instead, but no one knew whether it is being supported by IEC. There was a question about whether PD was included in the IEC 61869-1 - Common Clauses (it is and it includes reference to 60270). It was also suggested to refer to IEEE C57.113 which includes an appendix on partial discharge recognition.

10.5.3.2 Thermal Testing Results

Ross McTaggart presented the results of partial discharge testing at low temperature. The objective was to determine the effect of the inevitable frost on the PD performance of a test object immediately after removal from a freezer. This was a concern raised by Marcel Fortin in a previous meeting. The test was done on a 72 kV Capacitor section at -45 deg C. The result was that the PD extinction voltage was 100 kV (2.4 pu) immediately after removal and remained the same 5 minutes later (when more frost had formed). This indicates that this test method is valid, at least for porcelain-clad instrument transformers. Pierre Riffon suggested that the effect on cast resin IT's might be greater. Mike Haas (ITI) agreed to do some testing to find out. It was also noted that the humidity at the time of test is probably of significance.

10.5.4 New Business

- The concept of “Dual Logo” standards for IEC and IEEE was discussed
- The results of a Hydro 1 survey conducted by Peter Zhao were discussed. The survey indicates that there is little interest in Transient Performance (TPY) CT’s.
- Questions from the C12.11 WG were addressed