10.5 C57.13 Instrument Transformers – J. Smith

The Subcommittee met on October 27.
5 members and 7 guests attended

10.5.1 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

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 October 26, 2004. Five members and seven guests attended the meeting. One guest requested membership. The meeting was co-chaired by Mr. P. Riffon and Mr. R. McTaggart.

The agenda was approved with the addition of the IEEE patent policy.

Minutes of the San Diego meeting were approved during the Subcommittee meeting.

The IEEE patent disclosure requirement policy was discussed. Reference to the package received by the meeting attendees at registration 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. WG members did finally receive a complimentary copy. The lifetime of this document is 5 years and will expire in 2008.

No feedbacks have been received yet on the use of C57.13.5. It appears that this document is still too young to get feedbacks. None of the manufacturer representatives present during the meeting have used this document yet on actual orders.

An update of previous proposal regarding a new normative Annex (Annex H) related to unbalance current transformers for use as unbalance current protection of capacitor banks has been done. None of the members or guests present during the meeting raised new comments on this annex. This Annex is now quite mature and need to be surveyed within the WG and Subcommittee. A parallel survey within the WG and Subcommittee is recommended.

An update of previous proposal regarding the allowable temperature rise of power terminals of instrument transformers during temperature rise test. None of the members or guests present during the meeting raised new comments on this new clause. This clause is also quite mature and need to be surveyed within the WG and Subcommittee. A parallel survey is also recommended.

The main topics of IEC 60044-6 dealing with Instrument transformers having transient performance requirements have been presented. The discussion was mainly focused on TPY cores because they cover most of the CTs having rated transient requirement performances. Special routine and type tests applicable to these CTs were presented and discussed. It has been proposed to add an informative Annex to C57.13.5 for covering this special application and rating. This Annex will only make a simple reference to IEC 60044-6. It is not needed to repeat all the wording of IEC 60044-6 since the WG does not need to add anything more to the existing IEC standard. A first draft of this informative Annex will be circulated to the WG membership prior to the next meeting.

A PAR needs to be approved prior to the next meeting and will be requested to IEEE in the next few weeks. The PAR will ask to re-issue C57.13.5 as a Trial-Use Standard. It has been an agreement that it is still too early to change its status to a Full-Use standard because of a lack of feedbacks regarding its application. If needed, its status may be changed later on as a Full-Use standard. If this is the case, a revised PAR needs to be obtained and the scope of C57.13 needs to be changed accordingly.

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 October 26, 2004 in Las Vegas, NV, with four members and five guests present.

Old business

-Minutes from San Diego were accepted.
-Results of C57.13.6 D2 Recirculation:
Pool closed August 14, 2004
Ballot met 75% retuned requirement (90% returned)
82 Eligible people in-group
68 affirmative
2 negative with comments
4 abstention votes
The 75% affirmation requirement was met (97% affirmative)

New business

1 Review and discuss **negative** ballots, reject or accept and vote to recirculate
1) Jeffrey Nelson, TVA
a. Section 4- Add language similar to what appears in C57.13 section, 6.10, which requires certain type test and performance data be made available.
i. Chair comment:
1. Informed balloter that the scope and introduction specifically state that this standard C57.13.6 is subordinate to C57.13, in order to eliminate many areas of needless duplication. In addition, it is the expectation that these standards will merge in the future.
2. Balloter Rejected. Suggested the following sentence be added after 4.3: "*Characteristic data suitable for portraying or calculating the performance listed above shall be made available upon request"*
3. Chair will review with WG for consensus.
ii. *Working group rejected, and concurred that the requirement to provide characteristic data, along with many, many other requirements omitted from*

this draft standard, are covered by the clearly stated relationship of this document to C57.13. In addition, the lack of redundancy between the two documents improves clarity and potential for future errors in the revision process

b. Section 7.1- Suggests first paragraph can't say, "shall …at test points shown in Table 3, …" then turn around and say you only have to test at two points in last paragraph of this section. Suggests Deletion of last paragraph, thereby requiring four test points.
    i. Chair comment
        1. Informed balloter the issue of an option for two test points was thoroughly discussed and approved by WG.
        2. Accepted balloter concern for the wording. Re wrote first paragraph as follows (Balloter accepted by Email):

Accuracy tests for current transformers with 0.15 or 0.15S metering accuracy ratings shall be made on each transformer when energized at rated frequency. Two or four test points defined in Table 3 may be required.

    ii. *Working group accepted this wording*.

2) Randy Mullikin, Kuhlman
    a. Section 7.1: (technical comment only) Concerned that users assume that the order of test points in Table 3 dictates correct sequence for testing. He proposed different order.
        i. Chair comment:
            1. Accepted concern, but not specific sequence. Placed asterisk (*) in table next to "Test Point" column heading, and beneath table wrote: * No significance to test sequence.
        ii. *Working group accepted this wording*

3) James Frysinger, Vice Chair SCC14
    a. Misc Editorial suggestions. See attached.
        i. Chair: need input from WG, see attached for discussion.
        ii. Working group rejected, format used is the same as C57.13

Summary

. Chair will recirculate Standard for two changes to section 7.1 only.

Chair comment: Working group anxiously awaits publication of this standard.

10.5.2.3 Working Group on C57.13 Revision – Tom Nelson

Five members and eight guests attended the meeting that was chaired by Jim Smith in Tom Nelson's absence.

The minutes of the San Diego meeting were approved.

The new IEEE disclosure requirements regarding patent issues related to the WG work was presented. The group was asked if anyone is aware of patents relating to the content of C57.13 revision. There were no responses. It was noted that no patent or IP was disclosed or identified as relevant to C57.13 revision.

The status of the balloting process was reviewed. The graphics still needed to be completed so that the draft could be submitted to IEEE for ballot. Mr. Charlie Smith of ABB volunteered to help with the graphics.

Mr. Chris TenHaagen of GE – Energy presented a presentation on different connections for the testing of Instrument transformers for Partial Discharge. Mr. Ten Haagen will forward a copy of his presentation to the Subcommittee Chair to be emailed to the WG members for comments before the next meeting in Jackson, Mississippi.

10.5.2.4 Study Group IEEE Std C57.13.2 – Vladimir Khalin

The Working Group met on Tuesday, October 26 at 3:15 PM with 11 members and guests present.
The minutes from the San Diego, CA meeting were approved.
IEEE Patent Disclosure Policy was reviewed by the WG and an opportunity was provided for WG members and guests to identify or disclose patents that the WG member believes may be essential for the use of that standard. No responses were given.

The Chair reported the Ballot results as follows:

- Ballot met 75% returned requirement (89% returned)
- 97% - affirmative
- 3% - negative with comments
- 3% - abstention votes
- The 75% affirmation requirement was met (97% affirmative)

The WG reviewed the negative ballots and developed recommendations.
The Standard will be re-circulated.

10.5.4.5 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: V. Khalin (M), V. Nguyen (G), L. Davis (M), C. Ten Haagen (M), R. McTaggart (M), P. Canova (G), L. Recksiedler (G), V. Moreno (G), Paul Millward (M), J. Smith (M), A. Jonnatti (M)
Minutes

- Jim Smith presented the new IEEE disclosure requirements regarding patent issues related to the WG work
    - Farnoosh 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 meeting, June 8, 2004, Denver, were reviewed.
- PAR status and timetable were reviewed
    - Scheduled completion date: December 2005
    - Extending the completion date the PAR P1601: need to make decision in August 2005 if needed.
    - Scheduled P1601 Meetings:
        - October 25, 2005, TC, Las Vegas
        - March 13-17, 2005, TC, Jackson, Miss.

        - 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
- 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
- Some technical material presented previously was represented (dynamic range designation, …), and it was suggested to include some info (or reference) on accuracy testing.
- Next Scheduled Working Group Meetings
    - IEEE/PES Transformer Committee Meeting, Mar 13-17, 2005, Jackson Mississippi.

10.5.3 New Business

- A presentation entitled “A Proposed Saturation Curve for BCT’s” was made by Charlie Ballentine. It is available on the Instrument Transformer Subcommittee web page.