1. Instrument Transformers Subcommittee - Ross McTaggart

# Introductions

The attendees introduced themselves and reported affiliations.

# Quorum

15 of 24 members were present - quorum attained

Also 19 guests attended

# Approval of minutes – Washington, DC meeting

Motion by Pierre Riffon & seconded by Vladimir Khalin

# Review of Agenda

An agenda was displayed for this meeting. It was noted that both the WG to revise C57.13 and the WG creating the Milli-ampere CT standard have received PAR extensions through the end of 2016. When the revision to C57.13 is finalized both C57.13.5 and C57.13.2 will need to be updated. These updates will be addressed in a future meeting.

# Working Group Reports

## Working Group on Current Transformers with mA range (WG C57.13.7) - Chair: Henry Alton, Vice-Chair: Adnan Rashid

*Introductions*

*Acceptance of the Agenda*

10 members and 5 guests attended this meeting

Old Business (House Keeping)

The group accepted minutes of the Washington DC meeting.

The draft standard updates for action, from the previous meeting were tabled and reviewed. A motion to accept the changes was tabled and accepted by the working group. The following draft updates were made to generate a “Draft 5” of the document.

* Update references to ANSI/NCSL Z540-1-1994 to ANSI/NCSL Z540-3-2006
* Update figure 2 x-axis scale to -20, -10, 0, 10, 20
* Previous Figure 4 updates were briefly reviewed and accepted by the group

New Business Update

Vladimir Khalin’s suggestions from the previous meeting are interleaved with the motion to vote to go to ballot with the present draft 5. Vladimir summarized;

* That the Burden tables 3 & 4, should be reviewed and calculate burdens from VA.
* That power factor 0.9 should be power factor 1.0 or consideration should also be given to capacitive power factor.
* That there should be only one set of burdens for all CT’s up to 250ma rather than the two sets identified.
* Henry Alton stated that in the interest of time, the standard is as should move to the balloting process. It was further stated that these were good ideas and be possible to pick these suggestions up on a subsequent release. Jim McBride was concerned that the document would be moved forward if the changes affected the actual burden values or other technical requirements, which would cause instrument transformers in this category to be evaluated differently. It is understood that suggested changes to the form of the table do not affect how these instrument transformers are evaluated.

Vote by the Working Group to go to Ballot with Draft 5

A request for a vote to decide whether “Draft 5” of this document could be moved to the balloting stage was made. Ross McTaggart stated that a quorum must be confirmed by reviewing that enough voting members were present to conduct this part of the process. Henry Alton put up the list of voting members and confirmed that there were enough members present to vote. The list is attached with the email containing these minutes. The vote was unanimous

## TF on Station Service Voltage Transformers - D Wallace

A total of 47 people were in attendance with 16 out of 20 members present. A quorum was met.

4 new attendees requested membership

The minutes from the Washington, DC meeting were reviewed. Pierre Riffon made a motion for approval and it was seconded by Rudy Ogajanov. The minutes were approved.

A request had been made at the Savannah meeting to review the remaining comments and be prepared to discuss at the San Antonio meeting. These comments were compiled into on spreadsheet and distributed to the committee for review.

During the meeting, 57 of the 74 comments were reviewed and either accepted as presented, accepted with further comment or rejected. The comments that were accepted will be inserted into the current draft of the standard. The ones that require further comment will be modified and sent out as a survey to the work group for discussion at the next meeting.

It was decided that the remaining 17 comments will be reviewed at the next meeting in Memphis.

The meeting was adjourned at 10:45 AM.

On Wed 4/15, Ross McTaggart allowed extra time from the Instrument Transformer Subcommittee to complete the review of the remaining 17 comments. A roll call was performed and a quorum was present, therefore, the review of the comments was completed. After the results of the surveys are completed, Draft 2 of the standard will be released for group review and comments.

## Working Group for Revision of IEEE C57.13 Instrument Transformers - R. McTaggart

F.5.3.1 Introductions

F.5.3.2 Quorum

19 members + 11 Guests – quorum attained

F.5.3.3 Approval of minutes from Washington, DC meeting (motion by Pierre Riffon -seconded by Vladimir Khalin)

F.5.3.4 Discussion

The draft standard is proceeding through the balloting, comments resolution and recirculation process. Because of the status of the draft no new discussion was discussed during this meeting.

The balloting results were presented and a review was made of the schedule/progress made toward updating this standard was shown.

The revised draft standard is expected to begin the recirculation process on April 15, 2015 and it will be open for ten days. Approximately May 15th another meeting of the comments resolution group is likely to take place to resolve new comments in preparation of submitting the draft to RevCom. Key changes in the draft standard made by the ballot comments resolution group were presented.

Zoltan Roman asked about the inclusion of the voltage dependence on the accuracy of CTs. After some discussion it was determined that this material will not be included in draft under review and will have to wait until a future revision.

F.5.3.5 Adjournment

## WG PD in Bushings & PTs/CTs PC57.160 - Thang Hochanh

A check was made to determine if a quorum was present. A total of 15 WG members were present which did fulfill the quorum requirements.

Roster sheets were circulated for attendees and guests to sign in. Interested individuals could also indicate an interest in joining the working group on these forms. Two individuals requested membership.

The meeting began with the chairman presenting a number of partial discharge patterns an leading a discussion as to how the patterns should be interpreted.

Patterns were shown that were taken with older equipment. It was decided that these would not be included in the next version of the draft.

Focus was changed to discuss comments received from Thomas Sizemore on the VT/CT portion of the document. Some of the changes were based on comments from Pierre Riffon in an previous meeting. Considerable discussion took place regarding the proposed text regarding the acceptable pC limits for the background noise. Thang Hochanh will propose language based on the discussion that took place and then issue a survey.

It was determined that a section 7.1.3 needs to be added in order to cover combined CT/VT requirements. This will be similar to the section covering VTs.

The chairman then presented updated information on calibration based upon comment from Shibao Zhang for situation where a test tap is provided. Differing options where given about how common bushings of this type were in the market currently. Multiple people indicated that they have seen this type of bushing becoming more common.

Thang Hochanh then presented some comments on the balanced circuit for calibration. Figure 4.b in the draft was referenced.

# New Business

Ross McTaggart brought up that our sub-committee is being asked to take over a portion of the work for the ANSI CVT standard C93.1. The mechanism for this joint effort was not yet clear. Per Zoltan Roman our tasks would focus on dielectrics, ferro-resonance, etc. Twelve members indicated they were in favor of adding this activity.

# ITSC Adjournment