

TC 1.2 – Instruments and Measurements: Winter Las Vegas 2017

Meeting Minutes - Main Committee Meeting

1:00 – 3:30 PM, January 31, 2017; Caesars Palace: Forum 23

These draft minutes must be approved by this committee to be the official record

Attendees

Name	Affiliation	Email Address	Status
Jim Douglas	Imagineering and More	jim.douglas.imagineering@gmail.com	Voting
Steve Idem	Tennessee Tech Univ.	sidem@tntech.edu	Voting
Frank Spevak	Energy Conservatory	fspevak@energyconservatory.com	Voting
Mike Wegenka	Trane	mwegenka@trane.com	Voting
Terry Beck	Kansas State Univ.	tbeck@ksu.edu	
John Scott	Natural Resources Canada.	john.scott@canada.ca	Voting
John Neel	Johnson Controls/Frick	john.l.neel@jci.com	Voting
Dr. David Yuill	University of Nebraska	dyuill@uni.edu	Voting
Dr. Amir Jokar	Exponent, Inc. (Thermal)	ajokar@exponent.com	
Conner Hayes	Trane-Ingersoll Rand	Conner_Hayes@irco.com	
Craig Bradshaw	Torad Engineering	craig.bradshaw@toradengineering.com	Voting
Hongmei Liang	Carrier	hongmei.liang@carrier.utc.com	
Stephen Wage	Intertek	stephen.wage@intertek.com	
Dr. Houjun Yang	North Dakota State Univ	huojun.yang@ndsu.edu	Voting
Tyler Swanson	Intertek	tyler.swanson@intertek.com	
Steven Rogers	The Energy Conservatory	srogers@energyconservatory.com	

Administrative:

1. Call to order/introductions/establish quorum: Frank Spevak

9 of 9 voting members are present. Quorum was established.

2 YEA members present.

Attendance:

VM (Present): Michael Wegenka, Frank Spevak, Jim Douglas, Steve Idem, David Yuill, Craig Bradshaw, John Scott, John Neel, Huojun Yang

VM (Absent): None

2. Review of the agenda

Frank reviewed the agenda.

3. Review and approval of minutes from St. Louis meeting

One attendance issue was brought up in the minutes otherwise there were no comments. Motion to approve minutes by David Yuill and seconded by John Scott. Motion carried: (8-0-1-0 Chair voting).

4. TC Chair's breakfast –Frank Spevak

Notes from TC Chair Section 1 Meeting

Sunday 6/29/17– Las Vegas, NV

Notes of significance to TC 1.2 Instruments and Measurements

Main Points:

- Hightower Award recipient is Paul Lindahl with TC 3.6 & 8.6
- Service to ASHRAE Research Award recipient is Joseph Huber TC 1.3
- ASHRAE members now have access to ASHRAE's Science and TEchnology for the Built Environment. Available through the ASHRAE.org website.
- ASHRAE Technology Portal is now available. Journal articles and research reports. Visit technologyportal.ashrae.org.
- Looking for feedback on TC website template. Draft minutes are encouraged to be place on the TC site as long as it is very clear that they are Draft versions.
- New restructured TC MOP was approved in Las Vegas and is now online.
- Roster updates needed by Tuesday night to Section Head.
- Lengthy discussion with CEC liaison about programs (there are a lot of holes in the submission packages to CEC, responsibility of presenter and session chair), missing TC numbers (this was a mistake and measures will be taken to ensure it does not happen again), 3 strike rule.
- Standards committees are encouraged to submit definitions to the chair of TC 1.6 Terminology. Also words can be submitted and definitions asked for. Presently there are around 22 definitions for uncertainty. Problem may occur that 1.6 will return a list of definitions but it is responsibility of the standard committee to choose the definition for inclusion in the standard.

5. Liaison reports

Section head: Amir Jokar came and requested that we give him any comments to take back to the Section head meeting on Wednesday.

He went over several of the same issues that Frank had discussed from the section head meeting. He also brought up a request from ASHRAE as to how to maintain a list of all non-registered committee attendees. The committee responded that since many are actively engaged in the volunteer process of helping the standards committees, that they should not be asked to pay a fee to attend a committee meeting to volunteer their assistance when they are already incurring the expense to attend the meeting. The suggestion was made to have everyone obtain a registration badge which would display all pertinent ASHRAE information and a physical indicator (such as a barcode) for those that pay the conference fee.

6. Membership – Frank Spevak gave the update.

Voting members rolling off as of 7/1/17:

Frank Spevak
Jim Douglas
John Scott

Voting members rolling on as of 7/1/17:

Terry Beck
Lloyd Le
Hongmei Liang
Craig Bradshaw (change as quorum)

This will bring the voting membership to 8 and 1 non quorum.

David Yuill: Chairman
Victor Cincola: Vice Chairman
Jim Douglas: Secretary/ Standards
Frank Spevak: Research
Mike Wegenka: Webmaster
Steve Idem: Programs

Standards – Jim Douglas

Jim gave a report on SSPC 41, SPC23.2 and SPC 23.1R. A written report is included as an Annex B to these minutes.

In addition the topic of Guideline 2 was discussed since it is due for periodic maintenance.

Approximately 7 of the 10 SSPC41 standards refer to ASHRAE Standard Guideline 2 is officially being discontinued by ASHRAE as a reference. This will cause referencing issues for the 41 standards. Rick Hall established an Ad Hoc committee to investigate the topic of Uncertainty Examples with Christopher Stone acting as chair. Request for membership was made and 8 members volunteered. (Rick Hall, Christopher Stone, Hongmei Liang, Pat

Collins, Mark Kedzierski, Terry Beck, Michael Wegenka, Doug Collings, and Michael Shows. The Ad Hoc committee met on Sunday, January 29th, and continued their discussion on how to define what should be covered and how the data should be presented. Regardless of the outcome of the Ad Hoc group, Guideline 2 will no longer be allowed to be a reference within any Standard, but can continue to be a Bibliography listing.

A motion was made by Jim Douglas and seconded by David Yuill to reaffirm the Guideline 2 in an effort to start the process but delay the withdrawal action at this time. After a lengthy discussion it was decided to withdraw the motion and a new motion was made by Craig Bradshaw and seconded by John Neil to revise the guideline. Motion passed (9,0,0,0 chair voting).

Handbook – Terry Beck

The committee's handbook section has been completed and submitted to ASHRAE. Terry attended a Handbook Chair's meeting. ASHRAE has introduced an electronic method (Internet Explorer) to look at standards. The link to the method: authoring.ashrae.org. The software is a change tracking software to allow historical change to be documented by time and author. This software will eventually will become a requirement to use by Handbook subcommittees.

A new meeting was held on Monday, January 30th from 4 to 6 p.m. A general discussion was held and the group reviewed the new process for the next update session. Terry will be submitting a new spreadsheet to the TC1.2 committee to sign up for the next update work.

Research – Frank Spevak

Frank gave a report on the research subcommittee chairs' breakfast. A written report is appended to these minutes in Annex A.

Terry Beck reviewed a project that was tabled at the St. Louis meeting to develop a laboratory testing tool to measure air flow in ductwork that would be more accurate. Present errors in measurement occur in ductwork in the vicinity of duct fittings, such as tees and elbows.

At the SSPC41 meeting there appeared to be support and it was recommended to bring it up to the TC1.2 and then SSPC41 could co-sponsor the RTAR request.

The chairman decided that it would be best to discuss this in more detail at the summer meeting and proposed adapting the Handbook meeting time frame to include Research projects. This was the consensus of the committee.

Programs Subcommittee Chair's report – Steve Idem

Nothing was formally reported but the committee brought up the idea of smart, internet, and wireless sensor measurements use in HVAC equipment and applications could be a good topic for a winter meeting session in Chicago 2018.

Website status report – Michael Wegenka

ASHRAE has updated the tools for websites to automate some of it and make it an online format instead of needing specialized software.

Michael has used the new tool and has uploaded the committee's information and the website is up to date.

New/Unfinished business:

None was presented

Adjournment:

Michael Wegenka motioned to adjourn. Meeting concluded at 3:14 PM.

Annex A: Research Report – Frank Spevak

ASHRAE Research Sub-Committee Breakfast Meeting
Monday January 30, 2017, Las Vegas, NV

Main points:

- Joseph Huber received the Service to ASHRAE Research Award.
- Larry Markel, former RAC Chair made a public service announcement that all committees of ASHRAE need more and new members. If you are interested, talk to a committee chair or nominate yourself. Committee chairs are encouraged to note potential members for committees when in various meetings.
- RAC received and accepted 3 RTARs.
- There were 4 Work Statements (WS) considered with 1 conditionally accepted and 3 returned.
- Innovative Research Grants - there were 33 pre-proposals received and 6 are qualified for full proposals. Idea of these grants are to fund research in projects that are truly innovative not as a way for TCs to get projects through research. This is the most amount of proposals received since this has been created.
- New Investigator Award had 16 nominations and 1 was selected and that individual will be contacted.
- Co-sponsoring TCs should be providing input to RTAR and WS development. Full TC voting information is needed from both sponsoring and co-sponsoring TCs.
- A lot of emphasis was placed on Project Monitoring Subcommittee (PMS) training and work. A webinar will be announced soon. More information on Milestone and Task Monitoring will be announced. Some projects in WS stage have been returned as the milestones were not clear. Appropriate and timely actions need to be taken on a project for delayed or non-complete milestones.

Annex B – Standards Subcommittee Report – Jim Douglas

SSPC41 met of Sunday, January 29th from 1 to 3 p.m. at the Caesars Palace: Pompeian I room. The subcommittee reviewed the progress of all of the 41 series

standards that are currently in progress as well as those that will be coming up for periodic maintenance.

Subcommittee 41.1, Standard Methods of Temperature Measurement – E. Anderson

Standard 41.1 revision subcommittee met on Tuesday, January 31st from 10:00 am to noon. Committee continued their work on the update of the draft of the standard. It was determined that there should be considerable work on updating this standard for the current measurement technology and measurement techniques. New members and guests are always welcomed.

Subcommittee 41.2, Standard Methods of Air Velocity and Airflow Measurement – T. Beck

Standard 41.2-2016 is in the 2nd publication public review process. With one week to go in the review window there has only been one public review comment at this time. Once the comment is answered and fulfilled, a 3rd PPR will probably be required which would continue to delay the publication process and maybe passed the summer meeting in Long Beach.

Subcommittee 41.3, Standard Methods for Pressure Measurement – F. Spevak

Standard 41.3-2014 is due for periodic maintenance in January 2017. Frank made a motion to revise the standard, seconded by Chris Stone. Discussion time brought up the need for better pressure transducer standard requirements in the standard since it is referenced in several of the 41 series standards (41.9 and 41.10 specifically). Comments were made that the standard has to be broad enough to cover all users. An action item was given to Michael Perevozchikov to look into the sampling rate of pressure measurements to review the necessary sampling rate that is proposed in the 41.9 revision. Vote was taken on the motion and the motion passed (15,0,0,3). Member volunteers were: Alex Leyderman, Lloyd Le, and Frank Spevak.

Subcommittee 41.4, Standard Methods for Measurement of Proportion for Lubricant in Liquid Refrigerant – J. Douglas

Standard 41.4-2015 will be due for periodic maintenance in January 2018. Jim Douglas made a motion with Mark Kedzieski seconding to revise the standard and begin the process early since the standard should be only required to meet the mandatory language and referencing issues. Motion passed (15,0,0,3). Member volunteers

were: Mark Kedzierski, Mike Wegenka, Chris Seaton, Rick Hall, Jim Douglas as chairman.

Subcommittee 41.6, Standard Methods for Humidity Measurement – P. Collins

Standard 41.6-2014 is due for periodic maintenance in January 2017. Motion was made by Chris Stone and seconded by Mike Wegenka to revise this standard. Motion passed (15,0,0,3). Member volunteers were: Doug Collings Rick Hall Chris Stone, and Michael Shows as chairman.

Subcommittee 41.7, Standard Methods for Gas Flow Measurement – J. Scott

Standard 41.7-2015 will be due for periodic maintenance in January 2018. John reported that he expected this standard would meet the mandatory language requirement and would likely be brought up at the winter 2018 meeting to reaffirm.

A secondary discussion developed about the question of combining many of the 41 series standards (41.2, 41.7, and 41.8) together rather than having so many since they interact with each other. This is a subject that began five years ago and was addressed and found to have no support. Comments were brought forth by Alex Leyderman to support the merging but many comments were discussed about the actual user ease, the other standards that have referenced these independent standards, and the complexity of combining and maintaining a larger standard. The chairman brought out that an advisory public review to see the HVAC community interest could be sent out. Terry Beck noted that presently the new revision of Standard 41.2 is in the publication process and this subject should be tabled until after the standard is released. There was some support from the voting membership. Straw poll outcome was (2,11,2,3)

Subcommittee 41.8, Standard Methods for Liquid Flow Measurement – J. Scott

Standard 41.8-2016 has been published.

Subcommittee 41.9, Standard Methods for Refrigerant Mass Flow Measurement Using Calorimeters – M. Perevozchikov

The Standard 41.9 revision subcommittee committee met on Sunday, January 29th, from 10:00 am to noon. Committee made good progress. The 41.9 revision subcommittee committee also met on December 5 for an interim meeting and it was decided that the work

was done with the exception of the Uncertainty Analysis section. Pat Collins has submitted one section and Adam Michalson has offered to complete the other three examples needed. Once these are completed the PPR can begin.

Subcommittee 41.10, Standard Methods for Refrigerant Mass Flow Measurement Using Flowmeters – J. Neel

The Standard 41.10 revision subcommittee met on Tuesday, January 31st from 8:00 to 10:00 am. Committee made good progress at the meeting and additional action items were assigned. An interim meeting will be scheduled to continue work on the draft prior to the summer meeting. New members and guests are always welcomed.

Subcommittee 41.11, Standard Methods for Power Measurement – R. Hall

Standard 41.11-2014 is due for periodic maintenance in January 2017. A motion was made by John Scott and seconded by Chris Stone to revise the standard. Motion passed (15,0,0,3). Member volunteer were: Mike Wegenka, Jim Douglas, Eric Anderson, Alex Leyderman., Orkan Kurtulus, Rick Hall, Mark Kedzierski, and Michael Todd as chairman.

Subcommittee SPC 23.1R, Margaret Mathison, Chair, *Methods of Testing for Performance Rating Positive Displacement Refrigerant Compressors and Condensing Units That Operate at Subcritical Pressures of the Refrigerant*

The subcommittee has sent out the PPR1 draft for review. No meeting was scheduled for the Las Vegas meeting.

Subcommittee SPC23.2-2014, *Methods of Test for Rating the Performance of Positive Displacement Compressors that Operate at Supercritical Pressures of the Refrigerants*
Standard will be up for period maintenance in 2017 and TC8.1 will be responsible for the update.

Guideline 2-2010 (RA 2014)

Guideline 2 is up for maintenance 2017. This guideline does not meet the mandatory language issue so it will be necessary to revise this standard.

The TC1.02 is required to vote on this subject to revise, reaffirm, or withdraw the guideline.

A motion was made to revise the standard by Jim Douglas and seconded by David Yuill. Motion passed (9,0,0,0). Volunteers were requested to help with the revision process. Volunteers were: A chairman will need to be found.