

TC 1.2 – Instruments and Measurements: Kansas City 2019 Meeting Minutes - Main Committee Meeting

1:00 – 3:30 PM, June 25, 2019; 2012B, Kansas City Conv. Center)

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	
David A Smith	.		
Terry Beck	Kansas State Univ.	tbeck@ksu.edu	Voting
John Scott	Natural Resources Canada.	john.scott@canada.ca	
John Neel	Johnson Controls/Frick	john.l.neel@jci.com	Voting
Dr. David Yuill	University of Nebraska	dyuill@unl.edu	Voting
Victor Cincola	AccuTrol LLC	vcincola@mchsi.com	Voting
Eric Anderson	Anderson Engineering	eanderson@aenpi.com	
Craig Bradshaw	Oklahoma State Univ.	craig.bradshaw@okstate.edu	Voting
Mark Kedzierski	NIST	MAK@NIST.gov	
Carl Cochran	Intertek	carl.cochran@intertek.com	
Margaret Mathison	Iowa State University	3mathison@gmail.com	
Dr. Som Shrestha	Oak Ridge National Lab	shresthass@ornll.gov	
Robert A Moss	Dwyer Instruments	rmoss@dwyermail.com	
Jeffrey Wilms	JCI	jeffrey.wilms@jci.com	
Alex Schmig	Trane	Alexander.Schmig@trane.com	
Xnfeng Man	University of Nebraska	xnu@unl.edu	
Dr. Shilei Ma	Dwyer	sma@dwyermail.com	
Brandon Kelley	AAON	BWKelley34@gmail.com	
Forrest Meggers	Princeton University	fmeggers@princeton.edu	

A. Administrative:

1. Call to order/introductions/establish quorum: David Yuill

7 of 11 voting members (one non-quorum) were present. Quorum of 7 was established. One additional joined the meeting late. 8 of 11

4 YEA members present.

Attendance:

VM (Present): Jim Douglas, Steve Idem, David Yuill, Craig Bradshaw, John Neel, Victor Cincola, and Terry Beck

VM (Absent): Huojun Yang, Lloyd Le, Connor Hayes, Hongmei Liang

2. Review of the agenda and ASHRAE Code of Ethics

David read the ASHRAE Code of Ethics.
David reviewed the agenda.

3. Review and approval of minutes from the Atlanta winter

Motion to approve minutes by Craig Bradshaw and seconded by John Neel.
Motion carried: (6-0-0-4 CVN).

4. TC Chair's breakfast -David Yuill

Notes from TC Chair Section 1 Meeting
Sunday 6/23/19

Notes of significance to TC 1.2 Instruments and Measurements:

- TAC request for advice on the issue of reorganization of all TCs to reduce the total number from 120 to 30 by combining them into groups was considered but was not supported for the type of work this committee does.
- ASHRAE is promoting "change is important and good for business" with respect of combining committees and making forward thinking business changes for the organization

5. Liaison reports

Section head: Jen Leach did attend the meeting prior to the start and related that she was the new ASHRAE Liaison for this TC section. She wanted to know if there were any membership issues or questions.

B. Standards - Jim Douglas

Jim postponed a report on SSPC 41 due to time constraints. A written report will be included as an Annex B to these minutes.

C. Handbook - Terry Beck

The committee's handbook section has been completed.
We will start the process of reviewing it again for the next update Chapter 37.
Terry submitted by email an existing spreadsheet to the TC1.2 committee to sign up or revise the member commitment for the next update work.
Forrest Meggers spoke about a section of the handbook that could use some updating based on work that he has been doing with radiation temperature measurement.

D. Research - Frank Spevak

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

- 1) We voted to co-sponsor with TC8.11 an RTAR #1824 for research work to determine the "Barometric Pressure Impacts on Psychrometric Performance testing of Unitary Air-Conditioning and Heat Pump Equipment". The Work statement will need to be reviewed when completed. We will need to have at least one technical reviewer from our committee involved on the review process. Still in process
- 2) The future project about Vell Grid capture hood was discussed and the possibility of co-sponsoring it with TC 7.7 – Test and Balance. It was decided to discontinue pursuit, then a new thought to fund the measurement instrumentation involved in the measurement process.
- 3) Discussion about instrumentation in general as a possible research project.

E. Programs Subcommittee Chair's report – Steve Idem

No sponsorship of a program was agreed upon for the upcoming winter meeting was reported but a lot of discussion was done for future possibilities.

F. Membership – David Yuill/ Jim Douglas gave the update.

Voting members rolling off as of 6/30/19:
Steve Idem

Voting members rolling on as of 7/1/19:
Robert Moss
Frank Spevak

New Vice Chairman will be needed. Patrick Collins had agreed to the position but is unable to take the position and Brandon Kelly has offered to take the position.

This will bring the voting membership to 12 including 1 non quorum, creating a quorum level of 6.

As of 7/1/19:

Victor Cincola: Chairman
Brandon Kelly: Vice Chairman
James Douglas: Secretary/ Standards
Frank Spevak: Research

Craig Bradshaw: Webmaster
Stem Idem: Programs

Voting membership for the winter meeting in Orlando:

David Yuill
Craig Bradshaw – non quorum
James Douglas
Victor Cincola
Terry Beck
Lloyd Le
Hongmei Liang
John Neel
Huojun Yang
Robert Moss
Frank Spevak
Conner Hayes

Quorum will be set at 6 (11 voting members and one non-quorum voting member)

Some attendees had interest in becoming members.

G. Website status report – Craig Bradshaw

Craig Bradshaw the new webmaster for the committee report that the website is up to date.

H. New/Unfinished business:

No new or old business was presented

I. Adjournment:

John Neel motioned to adjourn. Meeting concluded at 2:58 PM.

Annex A: Research Report – Frank Spevak

Research Subcommittee Meeting

Notes from Research Subcommittee Chair Breakfast Meeting

Kansas City, MO

Monday, June 24, 2019

Research

- 7 RTARs presented
 - 1 accepted
 - 2 accepted with comment
 - 3 rejected
- 13 Work Statements
 - 1 accepted
 - 5 conditionally accepted
 - 7 returned

Awards

- Grant in Aid – given to a grad student researching ASHRAE related technologies and topics. 19 were selected out of 50 – receive as much as \$11,500
- New Investigator Award – given to new faculty (< 5years of service) to enhance their career. Can receive up to \$125k over 3 years in support of ASHRAE related research. 8 applications received – winner for 2019 Mohammed Heidarinajad from IIT
- Homer Adams Award – given to a grad student with an outstanding paper related to ASHRAE research project. For 2019 – Omer Sarfraz will receive \$5000
- Innovation Research Grant – Competitive research proposals that don't necessarily fit into the TC structure. There were 15 pre-proposals, 4 continued with full proposals and they are still being evaluated and will be announced in Orlando. As much as \$125k
- Service to ASHRAE Research Award – nominated by a TC/TG chair. Nominations need to be in by September 1

New Work Statement template is now live. Includes a new section, Plain English Abstract. Must be completed. Used for notifications to the public about the research project.

Note that all PMS meetings are open to all ASHRAE members to ensure they have the ability to learn about research money being spent. In person is preferred but can include remote. Schedule enough in advance so that the information can be included in ASHRAE programs. Make sure that all ex-officio members are included.

PMS webinar training took place April 25 for all current PMS members. Had about 50 people attended. Another will be scheduled for the fall. Also working on a PES webinar.

Funded Publications

Research funds will be used to support special publications, such as design guides and manuals that have a commercial need but is too much effort for volunteer activities. Can be as much as 10% of research budget. A new process is needed as it is different than a traditional research project. RAC to administer but Publications Committee will be actively involved. There will be a PTAR that will highlight the publication needed, identify the target audience, and why it needs to be funded versus volunteer effort. This will be submitted to MORTS who will then pass on to Publications Committee and then onto RAC. Publications will assess the background. After that process there will be a WSP that needs to identify the table of contents. RAC will work to ensure that the project is biddable and establish tracking measures.

ASHRAE Research Strategic Plan

Current version is from 2010 and needs a serious update. It needs to address modern technical challenges that didn't exist or were mainstream at publication. With a new ASHRAE Strategic Plan this new document will be able to align with that plan. A Research Advisory Panel will be formed and have 10 people and include the RAC Vice Chair. The Panel will be formed by Orlando. Need experienced, forward thinking leaders from industry, academia, consultants and government. This will be a 3-year project.

Database on RP costs

Created database of the last 50 RP to try and understand more. Cost estimates have a very large impact on the bids received. Bidders will adjust the scope in their proposal to match the estimate which can result in less than ideal project. Estimates can self-eliminate potential bidders. There is \$11.2 m in ongoing research. Add about \$1.5 m each year. The average award is \$131k with 95% in the range from \$48k to \$212k. The average time frame is 18 months with 95% ranging from 6 months to 30 months. Used to determine if your project is an outlier. Acknowledge that each project is unique. Looking to add more data to help gain insights for research in the future.

Annex B – Standards Subcommittee Report – Jim Douglas

1. Subcommittee Chair's Reports:

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

41.1-2013 revision subcommittee met to review the latest working draft on Tuesday, June 25, from 10:00 AM to noon.

Draft has progressed and will be ready to submit to the SSPC 41 committee for letter ballot vote for PPR shortly.

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

ASHRAE published the 41.2-2018 standard. This is a major accomplishment – the previous version was published in 1989 and the new version includes air velocity measurements in addition to airflow measurements.

The standard was available on the shelf at the bookstore.

Subcommittee 41.3, *Standard Methods for Pressure Measurement* – Open Chair position

41.3-2014R revision subcommittee met earlier today and reviewed the latest working draft. Progress was made through the normative section. Adam Mikealson—will be doing the Uncertainty Example section. Discussion was held to determine what the uncertainty examples should be shown. It was decided that one simple and one with data acquisition would be shown. Standard is on track for completion in 2020.

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

41.4-2015R revision subcommittee met to review the latest working draft on Monday, June 24, from 4:15 to 6:15 PM. We are dealing with issues of safety and sampling hardware complexity in the sampling process. Progress has been slow. New members and guests are always welcomed.

Subcommittee 41.6, *Standard Methods for Humidity Measurement* – M. Shows

41.6-2014R revision subcommittee met to review the latest working draft on Monday, June 25th, from 10:00 AM to noon. Committee is making good progress. New members and guests are always welcomed.

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

41.7-2015 (RA 2018) has been reaffirmed.

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

41.8-2015 (RA 2018) has been reaffirmed.

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

ASHRAE staff has published 41.9-2018.

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

41.10-2013 revision subcommittee met to review the latest working draft on Tuesday, June 25th, from 8:00 AM to 10:00 AM. A lot of progress was made at the meeting and the committee felt that the standard is ready for letter ballot voting of the SSPC41 for PPR progress to start. The standard is on track for PPR in the 2019 Fall.

Subcommittee 41.11, Standard Methods for Power Measurement – M. Todd

41.11-2014R revision subcommittee met to review the latest working draft on Monday, June 25th, from 2:15 to 4:15 PM. Many action items were assigned to update some of the graphics and examples. New members and guests are always welcomed.

Subcommittee 41.13P, Standard Methods for Fuel Heating Value Measurements – Jim Lutz

41.13P met during this conference and begin their work at preparing a new standard. New members and guests are always welcomed.