

MEETING MINUTES

TC 1.2 Instruments and Measurements

Orlando, Florida, January 26, 2010

Place: Rosen Shingle Creek, Suwannee 12

These minutes have been approved by TC 1.2 and are the official, approved record of the TC 1.2 meeting in Orlando, Florida. Votes cast during this meeting are in the format #for-#against-#abstain-#absent.

1. MEETING:

1.1. The meeting was called to order at 1:00 p.m. by Chairman, Pat Collins. Introductions were made and a quorum was established with 8 voting members present.

2. AGENDA:

2.1. Pat Collins reviewed the items for the meeting.

3. MEETING MINUTES:

3.1. The committee reviewed the Chicago prepared by Ron Moncrief.

3.2. Frank Spevak moved that the committee accept the minutes of the Chicago meeting. John Scott seconded. The minutes were approved 8-0-0-1.

4. LIAISON REPORTS:

4.1. Sriram Somasundaram, Section 1 Research Liaison, attended the meeting and asked for questions. Pat Collins asked if it is acceptable to distribute research reports within the sponsoring and co-sponsoring technical committees. Sriram stated that he was not aware of any restriction on report distribution but he would investigate and report back to Pat via email. Sriram also stated that in his opinion report distribution would be acceptable to the voting members of technical committees since they must approve the research project report.

4.2. Victor Penar, TAC Section 1 Head, asked if our web site was working acceptably and Frank Spevak responded that it was. He stated that roster changes must be submitted by Tuesday night and also discussed non-quorum members.

5. MEMBERSHIP / ROSTER:

5.1. Pat Collins discussed revisions to the TC 1.2 roster which will be effective at the end of the meeting in Albuquerque in June, 2010. Charlie Wright will become a voting member and James Schaeffer will become a corresponding member.

5.2. Pat also discussed the specifics of non-quorum members of technical committees. In summary, a non-quorum member is a technical committee member who cannot attend all the TC meetings but can provide valuable input into committee decisions. The absence of a non-quorum member at a meeting does not have any effect on the establishment of a quorum.

6. TC / TG CHAIRMAN'S BREAKFAST MEETING:

6.1. Pat Collins reported that the Hightower award winner was a member of a Section 1 technical committee. Technical committees should make a special effort to welcome committee meeting attendees and new members. Technical committees are urged to keep their web sites current. The Publications Committee stated that eight ASHRAE publications need to be revised. These publications are related to net zero design guidance and sustainability.

6.2. The use of Google Groups should be considered for use by technical committees (Facebook and other social networking sites are not recommended). Pat stated that TC 1.2 may not need to use anything more powerful than email. He stated that most of the emails TC 1.2 receives are requests for clarification of information in standards and other documents. Terry Beck is working on one such request. Pat stated that he needed to contact David Yuill because neither he nor Terry Beck has any contact information on the person who asked this question related to pitot tube traverses.

7. HANDBOOK:

7.1. Terry Beck said that he attended two handbook related meetings. The first meeting was for TC handbook chairs and the second was a training session for the 2013 ASHRAE Fundamentals Handbook. ASHRAE has set a deadline of February 1, 2010 for submitting additions to the CD+ version of the ASHRAE Handbooks. Terry asked committee members to inform him of any errors in the printed version of the handbook chapter.

7.2. Pat Collins asked how we can comment on the CD+ unless we purchase it. Terry stated that the technical committees should be able to access the CD+ similar to the access granted for the preparation of handbook chapters. Pat recommended that the Handbook Committee should provide a demonstration of the CD+ by a presentation in the technical program at future ASHRAE meetings or by putting a demo on the ASHRAE website.

7.3. ACTION ITEM: Terry Beck will contact Hank Bagheri and request that TC 1.2 have access to a CD+ demo by whatever means ASHRAE deems appropriate.

7.4. Terry stated that he will send a request to previous reviewers of the handbook chapter to start the review process for the 2013 revision.

7.5. Jim Douglas discussed a problem he has encountered in his standards revision work. ASHRAE will not allow references to the ASHRAE Handbook in the standards because the Handbook is not peer reviewed. John Scott stated that this is probably there because he is aware of occasions where an individual has prepared sections of a chapter with little review by other committee members.

8. RESEARCH:

8.1. Frank Spevak stated that the 2010 – 2015 Strategic Goals for Research were discussed. Not all research funds will be dedicated to these strategic goals. Funds will still be available for technical research ASHRAE members are requested to make comments on these goals by February 22, 2010.

8.2. Seven of the goals are energy efficiency related. Several research projects have been approved but not yet let out for bids due to a cash flow problem. However, research contributions have not been drastically affected by the economy. Each year ASHRAE normally moves from \$130K to \$150K from the Research Reserve Fund to research project operating funds. This was not done in 2009.

8.3. Frank also said that Strategic Research Plan may be found in the Technology Section of the ASHRAE website. ASHRAE is moving full force on the energy efficient, green, sustainable building bandwagon.

8.4. John Scott stated that he participated in a conference call on one of the goals. He said that the goals are broad based. They fall outside the scope of TC 1.2 but measurements will be needed to prove energy efficiency.

8.5. Pat Collins stated that this is mandated in 2012 by legislation passed in California. Energy efficiency must be proved initially and at later inspections during normal operation.

8.6. Craig Wray stated that the Performance Measurements Protocol is about to be published by Lilas Pratt, Manager of Special Projects. It probably is too late for TC 1.2 input and we were not contacted during the creation of this document. Craig Wray, Pat Collins and John Scott discussed the applicability of Series 41 standards to building performance measurements and concluded that these standards could be used. For laboratory measurements the goal is often less than 1 percent while in the field it may be from 5% to 10% due to leaky ducts, poor measurements locations, etc.

8.7. John Scott stated that the planned revisions to Standards 41.7, 41.8 and 41.10 do not prescribe error or uncertainty. The user must specify this in a test plan written specifically for each job.

8.8. Craig Wray discussed several test methods which are more useful for building performance measurements than laboratory grade measurement methods. He also informed the committee that there is a \$1.5M ASHRAE project on measurements in which TC 1.2 should get involved. The project contact is Bruce Hahn, Director of Strategic Planning.

8.9. RESEARCH-RP 1245: Determine the Effect of Duct Fittings on Air Velocity Measurements.

8.9.1. The RP1245 meeting was held Monday with the principal investigator. Progress had been made toward the completion of the planned measurements but more measurements need to be taken. The current goal is to complete the measurements by the end of June, 2010.

8.9.2. The draft report will be available at the meeting in Las Vegas in January, 2011. Frank stated that TC 1.2 does not need to vote on extending the project completion dates; the project committee will recommend these changes to Mike Vaughan.

8.10. Regarding future research, Frank stated that the results of RP 1245 may be used to identify future research in this area.

8.11. Jim Douglas discussed a possible research project on the size of oil samples which relates to Standard 41.4. If, for example, five five-gram oil samples could replace the large samples currently used, there would be little effect on system charge. Jim stated that SSPC 41.4 probably will submit this project and TC 1.2 will be a co-sponsor, possibly with other technical committees. Jim stated that it would be ideal to get the results of this research before the revision of Standard 41.7 is complete but he will not delay its publication.

8.12. Pat Collins stated that he had received an email from Len Damiano regarding an RTAR but Len was not at the meeting to discuss it.

9. STANDARDS:

9.1. Jim Douglas reported that the SSPC 41 Standards Committee met on Sunday from 1 PM to 5 PM and attendance was good. Jim reviewed the SSPC 41 Standards Report copied below.

9.2. SSPC 41 Status Reports from Subcommittee Chairs

9.3. Subcommittee 41.1, Pat Collins, Chair, Standard Methods for Temperature Measurement:

9.3.1. Will add new information and change the emphasis on thermopiles, IR temperature sensors, and thermistors in the 41.1 standard. Pat challenged himself to complete 41.1 for public review by January 2012.

9.4. Subcommittee 41.2, Terry Beck, Chair, Standard Methods for Airflow Measurement:

9.4.1. Terry Beck reported that Subcommittee 41.2 met last and is making changes to the Nomenclature. In addition, the drawings and the diagrams are being updated and unnecessary figures are being removed.

9.4.2. ACTION ITEM: Pat will provide Terry with JPGS of the drawings that are in the current version of the standard.

9.4.3. Rick Hall asked Terry if he would accept the goal to have a public review draft for the January 2012 meeting. Terry accepted Rick's recommendation. Terry has found that there are

several different definitions of standard air properties used in ASHRAE standards and ASHRAE's book of Terminology.

9.5. Subcommittee 41.3, Frank Spevak, Chair, Standard Methods for Pressure Measurement:

9.5.1. Frank Spevak reported that the subcommittee finished all of the text except for the descriptive information for all of the different pressure sensors. Frank asked the committee to recommend software that can be used to modify the drawings.

9.5.2. ACTION ITEM: Frank will contact ASHRAE and ask for assistance on revising drawings for the standards. He will determine if modifiable copies of the drawings available.

9.5.3. Frank will forward a draft copy of gauge descriptions to gauge manufacturers for review and comment.

9.5.4. Work left on generic description of measurement types and retyping the equations into WORD. Expect to have a version ready for public review by the January 2011 meeting.

9.6. Subcommittee 41.4, Jim Douglas, Chair, Standard Methods for Proportion of Lubricant in Liquid Refrigerant Measurement:

9.6.1. Jim Douglas reported that the subcommittee has three more sections to review, which includes the uncertainties. Mike Wegenka is working on the uncertainties. We are 80 % done.

9.6.2. Alex Leyderman voiced his concern that there are too many standards and not enough members to work on the standards. He suggested that all of the 41 standards be combined into a single standard.

9.6.3. 15 attendees were at the Monday, January 25 meeting held at 10:00 a.m. (6 regular members and 9 graduate students)

9.6.4. The committee finished reviewing the standard and it will be put into working draft copy ready for the final committee review by end of February.

9.7. Subcommittee 41.6, Pat Collins, Chair, Standard Methods for Humidity Measurement:

9.7.1. Pat Collins reported that the subcommittee wants to take published research of the new aspirated wet-bulb psychrometer and include it in 41.6, and remove it from 41.1.

9.7.2. Alex Leyderman voiced his concern that 41.1 has not been involved in the revision of 41.6. Pat said that 41.1 has agreed to the requested changes back when this revision process started.

9.7.3. TC 1.1 is writing the TPS for a new standard for the humidity calculations.

9.7.4. Pat challenged himself to complete 41.1 for public review by January 2012.

9.8. Subcommittee 41.7, John Scott, Chair, Method of Test for Measurement of Flow of Gas, and Subcommittee 41.8, John Scott, Chair, Standard Method for Measurement of Liquids in Pipes Using Orifice Flow meters:

9.8.1. The subcommittee will hold a meeting on Tuesday and will meet concurrently because they are sister standards. They have a rough draft for 41.7 and 41.8. They need to modify and update references.

9.8.2. John set a target to have the standards ready for public review by January, 2012.

9.8.3. John needs additional members for the revision subcommittees.

9.8.4. John also noted that the website does not show that the TPS for 41.7 and 41.8 have been revised. The TPS for 41.7 will be revised to restrict its scope to dry gas flow.

9.8.5. Alex Leyderman recommended that the title of 41.7 be revised to include “for atmospheric pressure.” John said that the scope of the standard makes it known that the standard is applicable for only atmospheric pressures and that ASHRAE makes the scope available for review before the standard is purchased.

9.9. Subcommittee 41.9, Rick Hall, Chair, Standard Methods for Volatile Refrigerant Mass Flow Measurement Using Calorimeters:

9.9.1. Rick Hall reported that this standard is due for periodic revision to maintain its ANSI accreditation. Standards cannot be revised if any of the references have been revised. The committee made it through the first quarter of the standard and is expected to be finished and ready for the draft completion prior to the summer meeting.

9.10. Subcommittee 41.10, John Scott, Chair, Standard Methods for Volatile Refrigerant Mass Flow Measurement Using Flow meters:

9.10.1. Published in 2008 and not actively being revised. Currently waiting for notification from ASHRAE.

9.11. Subcommittee 41.11, Eric Graham, Chair, Standard Methods for Power Measurement:

9.11.1. Eric Graham has resigned the chairman position and Rick Hall has assumed this roll. The subcommittee is working on the basic structure and overall content of this new standard. Nearly all of this standard will be concerned with electrical power measurement, but shaft power measurement is also included in the scope.

9.12. Guideline 2: Has gone out for public review.

9.13. Jim Douglas stated that all of the 41 Series standards should address field test issues.

10. PROGRAMS SUBCOMMITTEE:

10.1. Steve Idem stated that he would like some ideas for programs that will generate ideas for research. Jim Douglas discussed a possible future program on oil samples but it's too early to submit it.

10.2. Frank discussed the seminar, Unresolved Issues of Duct Measurements related to Temperature, Humidity and Airflow. This seminar was proposed for the Orlando meeting but was not included in the program. Frank stated that he will resubmit this seminar for the Albuquerque meeting. Frank plans to revise the title and abstract to align it better with the conference theme. Charlie Wright volunteered to add another presentation to this seminar. It will be titled: "Exploding the Myth of Low Velocity Pitot Tube Measurements."

11. WEBSITE:

11.1. Frank Spevak stated that he will update the website in accordance with the committee actions at the Orlando meeting.

12. OLD BUSINESS:

12.1. Pat Collins said that he had received notice from ASHRAE that the revision of the cognizant technical committees for the 41 Series standards has been approved.

13. NEW/UNFINISHED BUSINESS:

13.1. John Scott offered copiers of the draft standards 41.7 and 41.8 to anyone desiring a copy.

14. ADJOURN MEETING:

14.1. Jim Douglas moved that the meeting be adjourned, John Scott seconded, and the motion was approved 8-0-0-0. The meeting adjourned at 3:30 p.m.

ATTENDEES:

Terry Beck (VM), Patrick Collins (VM), James Douglas (VM), Steve Idem (VM), Ron Moncrief (VM), John Scott (VM), Frank Spevak (VM), Mike Wegenka (VM)

Craig Wray (CM), Charlie Wright (CM)

Tom Aiken, James Schaefer