

MEETING MINUTES

TC 1.2 Instruments and Measurements

Chicago, Illinois, USA, January 24, 2012

Place: Palmer House Hilton; Dearborn (3)

These minutes have been approved by this committee and are the official record of the meeting.

Votes cast during this meeting are in the format #for-#against-#abstain-#absent.

1. MEETING:

1.1. The meeting was called to order at 1:01 p.m. by Chairman, Steve Idem. Introductions were made and a quorum was established with 6 of 8 voting members present. Other 2 voting members arrived after the approval of the minutes from last meeting to make a full contingent: 8 of 8 voting members present.

2. AGENDA:

- 2.1. Steve Idem reviewed the items on the Agenda. No revisions were suggested.
- 2.2. Proposed agenda was approved 6-0-0-2.

3. MEETING MINUTES:

- 3.1. The committee reviewed the Montreal minutes prepared by Charlie Wright.
- 3.2. Frank Spevak moved to accept the minutes with no revisions. John Scott seconded. The minutes were approved 6-0-0-2.

4. LIAISON REPORTS:

- 4.1. Victor Penar, TAC Section 1 Head, covered the following topic:
 - 4.1.1. TC 1.2 is small in its membership numbers. The concern is vulnerability to coming up short on a quorum. Victor encouraged the committee to expand in number. He suggested using the “Help Wanted” feature of the ASHRAE website.
- 4.2. Art Geisler, Research Liaison discussed the following:
 - 4.2.1. Thanks to the PMS for RP1245, which is nearing completion.
 - 4.2.2. The RTAR for 1636 needs revision to address comments by review committee if it is to be accepted by RAC. Art G. volunteered to review the RTAR prior to re-submission for his advice on content. (See section 8 below for more on RESEARCH.)

5. SSPC 41 Report by Chair:

5.1. In the temporary absence of the SSPC Chair, the following was reported:

5.1.1. The following standards are being revised and updated and are expected to be ready soon for the Public Review Process: 41.1 *Standard Methods for Temperature Measurement*; 41.4 *Standard Methods for Proportion of Lubrication in Liquid Refrigerant Measurement*; 41.6 *Standard Methods for Humidity Measurement*.

5.1.2. The update and revision of Standard 41.6 will incorporate the findings in ASHRAE RP1460, and will include the description of and reference to the Wet-Bulb Aspirator; simultaneously the Wet-Bulb Aspirator will be deleted from Standard 41.1.

5.1.3. The development and upkeep of all the 41-series standards are progressing well.

5.1.4. For further information about SSPC 41, please refer to meeting notes from that committee.

6. TC/TG CHAIRMAN'S BREAKFAST MEETING:

6.1. Steve Idem reported the following;

6.1.1. ASHRAE is being "re-branded". Look for this on the ASHRAE website starting next week.

6.1.2. Regarding program proposals: CEC will be verifying TC sponsorship of proposed programs.

6.1.3. TCs are encouraged to keep their websites up-to-date with meeting minutes and agendas.

6.1.4. In future, all speakers, BOD members and CEC members will be charged \$100 for registration to the conferences (Summer and Winter meetings). In past these registrations have been complimentary. (Please note: It is allowed to participate in TC work without registering for the conference.)

7. HANDBOOK:

7.1. Terry Beck reported.

7.2. TC 1.2 responsible for 2013 Fundamentals Chapter 36 (*Measurements and Instruments*)

7.3. Final proposed revisions are due May 31, 2012. Terry Beck will submit revisions.

7.4. Final proposed revisions are due 31MAY2012. Terry Beck will submit revisions.

7.5. Terry has a sign-up sheet arranged by chapter sections. 16 of 19 sections are covered by at least one reviewer.

7.5.1. TERMINOLOGY section is to be reviewed by all TC1.2 members

7.5.2. Terry will distribute Word files or a link to same to all TC members

7.5.2.1. Username: hndbkhero; password: hvacrev

7.5.3. For equations: if current print edition is o.k., note as such, because any printout or view from the link may be messed up (due to software)

7.5.4. Regarding sections needing reviewers: David Yuill volunteered to seek help from relevant TC's to help review

7.5.5. Terry will be setting and distributing a schedule with deadlines identified

8. RESEARCH:

8.1. Frank Spevak reported on the research meeting.

8.1.1. At the Research breakfast it was announced that the Service to ASHRAE Research Award was given to Drew Crawley.

8.1.2. It is reported that the Greater Philadelphia Innovation Cluster (GPIC) has money available: perhaps \$2M/yr for 5 years. Stressing innovation. ASHRAE members encouraged to consider this as possible resource for additional research funding.

8.1.3. Current Research status:

8.1.3.1. 71 projects under contract

8.1.3.2. 16 completed

8.1.3.3. 12 being evaluated as to: can they be closed

8.1.3.4. 10 TRPs in the Fall

8.1.3.5. 5 WS on hold/pending

8.1.3.6. 5 unsolicited RPs – an unusually high number. There is a concern that URPs are being used to bypass RTAR & TC process. ASHRAE will monitor.

8.1.4. There are funds available for more ASHRAE Research

8.1.4.1. 6 RTARs being evaluated

8.1.4.2. 2 WS for RAC to evaluate

8.1.4.3. There is a new RTAR cover sheet

8.1.4.4. "Innovation Awards" (\$50k/yr for 2 years) still available

8.1.4.5. Spring Deadline for RTARs, WSs, etc.: FEB 15, 2012

8.1.4.6. Summer Deadline for RTARs, WSs, etc.: MAY 15, 2012

8.2. RESEARCH RP-1245: *Determine the Effect of Duct Fittings on Air Velocity*

Measurements. This RP is co-sponsored with TC7.7. The Final Report was reviewed in detail by the PMS with suggestions for minor additions/clarifications. The PMS voted to recommend to the cognizant TCs (TC 1.2 and TC 7.7) to accept the final report with the

recommended additions/clarifications. A vote was taken and TC 1.2 voted to accept the report: 5-0-1-0 (PI recused, CNV).

8.3. RTAR 1636, relating to ... *High Accuracy Relative Humidity (RH) Sensors*, has been returned to the TC with comments from RAC. Pat C. will handle re-submission with modifications to address the comments. TC1.2 needs to approve the revised RTAR by letter ballot prior to re-submission.

8.4. New Research ideas were discussed:

8.4.1. A study like RP-1245 (*Effect of Duct Fittings on Air Velocity Measurements*) in Return Ducts.

8.4.2. Nozzle Box Design issues. It was reported that evaluating 1 nozzle vs. 4 nozzles using flow calculations (ΔP vs. Heat Balance equations) can yield errors of +2% vs -5% of flow. Steve Idem volunteered to consult with TC 5.1 to possibly evaluate multiple-nozzle chamber design error analysis.

8.5. No votes were taken to advance a particular idea at this time.

9. STANDARDS:

9.1. Jim Douglas reported that the SSPC 41 Standards Committee met on Sunday and attendance was good. Jim and others discussed the status of each 41 series standards subcommittee. For more details see the SSPC 41 minutes on the TC 1.2 website.

9.2. SSPC 41 Status: Please refer to SSPC 41 page at ASHRAE website. These are the standards:

9.2.1. Subcommittee 41.1, Pat Collins, Chair; *Standard Methods for Temperature Measurement.*

9.2.2. Subcommittee 41.2, Terry Beck, Chair; *Standard Methods for Airflow Measurement:*

9.2.3. Subcommittee 41.3, Frank Spevak, Chair; *Standard Method for Pressure Measurement.*

9.2.4. Subcommittee 41.4, Jim Douglas, Chair; *Standard Methods for Proportion of Lubricant in Liquid Refrigerant Measurement.*

9.2.5. Subcommittee 41.6, Pat Collins, Chair; *Standard Methods for Humidity Measurement.*

9.2.6. Subcommittee 41.7, John Scott, Chair; *Standard Methods for Measurement of Gas Flow.*

9.2.7. Subcommittee 41.8, John Scott, Chair; *Standard Methods for Measurement of Liquid Flow*.

9.2.8. Subcommittee 41.9, Rick Hall, Chair; *Standard Methods for Volatile Refrigerant Mass Flow Measurement Using Calorimeters*.

9.2.9. Subcommittee 41.10, Shane Angle, Chair; *Standard Methods for Volatile Refrigerant Mass Flow Measurement Using Flowmeters*.

9.2.10. Subcommittee 41.11, Rick Hall, Chair; *Standard Methods for Power Measurement*.

10. PROGRAMS:

10.1. Terry Beck and Charlie Wright again discussed a seminar that would discuss low velocity measurements with pitot tubes and the directional effects of airflow on flow measurements and what to do with negative velocity pressure readings in traverses. Steve will contact Terry and Charlie about this seminar proposal.

11. MEMBERSHIP:

Several Corresponding Members will be dropped from the list in order to clean up the roster.

12. WEBSITE:

Frank Spevak: A few things need to be updated.

13. NEW/UNFINISHED BUSINESS:

An engineering question relating to ASHRAE Std 33-2000 and ANSI/ASHRAE Std 41.2-1987 (RA92) was submitted from ASHRAE to the TC Chair. Steve Idem will respond.

14. ADJOURN MEETING:

14.1. Frank Spevak moved that the meeting be adjourned, John Scott seconded, and the motion was approved 8-0-0-0. The meeting adjourned at 3:18 p.m.

ATTENDEES:

Voting Members: Steve Idem, James Douglas, John Scott, Frank Spevak, Mike Wegenka, Charlie Wright, David Yuill, Terry Beck