

**2017 ASHRAE SUMMER MEETING
Long Beach, CA**

TC8.11 Unitary and Room Air Conditioners and Heat Pumps

**Monday, June 26, 2017: 4:15 – 6:30 PM
Location: Long Beach Convention - 202C**

TC8.11 Subcommittee Meeting – Sunday, June 26, 3:15 -5:00 pm – Long Beach Convention 201A

Minutes

1. Call to order Messmer
 - a. Meeting was called to order at 4:18 p.m.

2. New People. Messmer
 - a. 4 first time attendees

3. ASHRAE Code of Ethics Commitment Messmer
 - a. In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests. (See full Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>)

4. Introductions All

5. Determination of a quorum Messmer
 - a. Quorum was met. 11 of 12 voting members present.
 - i. Roy Newberg-Absent

6. Announcements and Highlights Messmer

From TC Chairs Breakfast Meeting

 - a. This year is 125th anniversary of ASHRAE
 - b. Programs are being reject with too much commercialize
 - c. New policy for programs: it is now acceptable to put full URL Links into presentations
 - d. Roster changes where late getting out to TCs. The official roster deadline was extended until July 8th.
 - e. Please get a badge even if not attending Conference Programs
 - a. Badges to attend TC meeting is free
 - b. The purpose for getting a badge is so ASHARE can get accurate count of attendees and allowing meeting participants a way to identify each other.
 - c. A suggestion was made: "It would be nice to add ASHRAE Logo on the TC Badges. The plain white badges could easy be imitated. "
 - d. Reminder that Basecamp is available for TC members to use for collaboration on ASHRAE projects.



Section Breakfast
Agenda and Handout

7. Agenda additions All
 - a. No additions to the agenda were requested.

8. Liaison reports (as they arrive) Liaisons
- a. MTG – Low GWP Refrigerants Uselton
- i. Large RP that has been funded by multiple sources. The purpose is to identify/determine research that is needed on/for Flammable Refrigerants to go into common use.
 - ii. ASHRAE has three ongoing projects in this area
 1. RP-1806 Flammable Refrigerants Post-ignition Simulation and Risk Assessment
 2. RP-1807 Guidelines for Flammable Refrigerants Handling, Transporting, Storing and Equipment Servicing, Installation and Dismantling
 3. RP-1808 Servicing and Installing Equipment using Flammable Refrigerants: Assessment of Field-made Mechanical Joints
 - iii. AHRTI has few ongoing projects in this area
 1. One that has just been completed and is available for download is AHRTI-9007
http://www.ahrinet.org/App_Content/ahri/files/RESEARCH/Technical%20Results/AHRI_9007-01_Final_Report.pdf
 - iv. Three Sub-Groups have been Formed
 1. Programs
 - A lot of work is being done in this area and the idea of this group is to get the work out to the public as fast as possible.
 2. Codes and Standards
 - This group was just formed in Vegas. This group is currently compiling a list of relevant standards within the USA and Internationally. This list will show the relationships between standards as well as their revision cycle.
 3. Research
 - v. The plan/hope is to repeat testing done at UL with A2L Refrigerants this time focusing on smaller equipment using A3 Refrigerants.
- b. MTG – ASEC Baxter
- i. MTG did not meet in Long Beach
 - ii. Currently Working on a WS to Define Avoided Sources Energy Consumption Potential Technologies
 - iii. RAC Reviewed this WS in January (Las Vegas) and it was returned to the MTG
 - iv. RAC Suggested they get more TC involvement (started with TC 6.8)
9. Approval of minutes from Las Vegas Messmer
- a. A few minor additions/edits were requested.
 Motion to approve Las Vegas draft minutes, with those amendments, Sivakumar Gopalnarayanan. Seconded by Rusty Tharp.
PASSED unanimously 10-0-0-1 CNV (chair not voting).
10. Membership/Roster Messmer
- a. All TC Membership Request are now online
 - b. Four voting members will be rolling off
 - i. Chris Stone, Rusty Tharp, Ron Newberg, Man Hoe Kim
 - c. Three voting members will be rolling on
 - i. Darin Nutter, Bo Shen, Kishan Padakannaya, Henry Ernst
 - d. Roster deadline move to July 8th

11. Subcommittee reports

a. Programs

Jeff Warther

- i. Tracks for Chicago
 1. Systems and Equipment
 2. Fundamentals and Applications
 3. Standard, Guidelines and Codes
 4. Earth, Wind, and Fire
 5. Transportation, IAQ, and A/C
 6. Tall Buildings
 7. Modeling Throughout the Building Lifecycle
 8. Heat Exchange Equipment
 9. Expo Mini-Refrigerant
 10. Expo Mini -Residential
- ii. Deadline July 7th for Conference Papers
- iii. Deadline August 1st for Seminars
- iv. Discussion on Co-sponsoring two Programs in Chicago
 1. Recent Advance in Solid State Cooling Technology
 - Dutch Uselton Motioned TC8.11 to cosponsor and 2nd By Kevin Mercer
PASSED unanimously 10-0-0-1 CNV (chair not voting).
 2. Low-GWP Refrigerant in Heat Exchange Equipment Workshop
 - Sivakumar Gopalnarayanan Motioned TC8.11 to cosponsor and 2nd Rusty Tharp
PASSED unanimously 10-0-0-1 CNV (chair not voting).
- v. Support Track for 2019 - HVAC Equipment and System Optimization
 - Brief Discussion. No strong opinions either way.
 - Chair will sent email to support this track....
- vi. Deadlines for Houston
 1. Abstracts August 28th, 2017
 2. Conference Papers Dec 8th, 2017
 3. Seminars February 9th, 2018
 4. Presentations June 1st, 2108
- vii. Houston Tracks
 1. HVAC/Refrigeration System and Equipment
 2. Fundamentals and Applications
 3. District Energy and Cogeneration Plants
 4. Safety Guarding Your HVAC & Refrigeration Systems
 5. Residential and Modern Buildings in Hot and Humid Climates
 6. Commissioning for New and Existing Building in their Operation
 7. Research Summit
 8. HVAC/R Control Freaks
 9. HVAC/R Analytics
- viii. Proposals/New Ideas
 1. Discussed setting up a Forum for Chicago on DOE Final Rule Making
 - Omar volunteered to be Program Chair
 - Forum may/should include
 - i. Speakers from DOE, AHRI, etc. Limit OEM.
 - ii. SEER2 and HSPF2-What this means to the Homeowner
 - iii. Test procedures and DOE regulations
 - iv. Need to have coordination in advance between speakers

b. Research

Eric Berg

i. Research Chair Breakfast Notes

1. ATARs: 7 considered, 1 accepted, 3 accepted with comments, and 3 rejected
2. Work Statements: 11 considered, 1 accepted, 7 conditionally accepted, 3 returned
3. Changes:
 - A lot of issues with the PDF formats so Docs will be going back to word format
 - PMS has to setup milestones and track and approve for the PI to get paid.
4. RAC is wanting ideas on how to get research out to a wider audience/public

ii. RTAR -1824 "Accounting for Barometric Pressure Impacts on Psychrometric Performance Testing of Unitary Air-Conditioning and Heat Pump Equipment" was Approved

1. John Winkler is going to work to write and submit the WS

iii. WS -1733 "Develop Design Criteria for Psychrometric Air Sampler and Mixer Apparatus for Use in ASHRAE Test Standards" was Approved

1. This is now going out for bid!

iv. TC 8.11 currently has 6 active RP

1. RP-1645
 - A 3-month extension was ask to finish-up
2. RP-1705
 - Project is ongoing, but running a little behind on setting up lab
 - A 1-year extension has been ask for
 - This RP is being done at the University of Nebraska
3. RP-1721
 - At Sunday's Sub-meeting the PI did presentation
 - PI is working on finalizing test matrix
 - Having a web meeting in month to do this.
4. RP-1733
 - Discussed earlier
5. RP-1743
 - Awarded to Oklahoma State University, PI Christian Bach
 - Having first web meeting early August to discuss initial progress
6. RP-1785
 - Awarded to Oklahoma State University, PI Christian Bach
 - Having first web meeting early August to discuss initial progress
 - Formal RP start date Aug 1st 2017

v. Ideas

1. Cyclic Testing Cd (Reduce the Uncertainty in this Testing)
 - Dutch Useton to ask AHRI about data to use to do statistical analysis.
 - Current default Cd value is not realistic
 - A new procedure on Cd has recently been implemented
 - Write an RTAR to compare old Cd procedure with new procedure
 - i. Start RTAR/RP approval process now so when new data is readily available project would be started.
 - ii. Chad Kirkwood to write RTAR and will continue discussion on details and support in SPC-37 meeting on Wednesday
2. WS- Effect of Psychrometric Chamber Outdoor Room Temperature Stratification on Measured Performance

- Scott Creamer has already wrote a WS (Skipping RTAR) on this subject
- Discussion: to address following feedback and then submit to RAC
 - i. Define/Add more details to test matrix, milestones, tasks, and itemized cost estimate.
 - ii. Need to be update to new form
- vi. Co-Sponsoring Opportunities
 1. RTAR: Effect of Contaminants in Airflow (DOCs, Psychrometric Property)
 - Just started writing RTAR
 - once RTAR is complete TC will consider
 2. RTAR: Oil Retention in Microchannel Heat Exchangers
 - Currently working on RTAR , Est. to be 70% done
 - once RTAR is complete TC will consider
 3. RTAR: Effeteness of Air Filtration on mini-splits
 - Looking for help on writing RTAR
 - Did not get much interest from TC



TC 8_11 Research
Summary.xls

vii.

c. Handbook

Ray Rite

- i. TC 8.11 Responsible for HVAC Applications: CH1 – 2019:
 1. CH1 Deadline April 12th 2018
 2. Plan is to have TC vote on updates in Chicago
 3. Over the past three months feedback form volunteers has been collected.
 4. Request for volunteers to rewrite/update each section based on the pervious feedback
 - Ray Rite will compile the rewrites/updates in October, followed by a web meeting to discuss finalizing before the Chicago Meeting
 - i. References - Ray Rite
 - ii. Section 1- Randy Palm
 - iii. Section 2 - Jun Lee
 - iv. Section 3 - Dane Christensen
 - v. Section 4 - Scott Creamer
 - vi. Section 5 - Scott Wujek

d. Standards

Chris Stone

- i. ASHRAE-16
 1. Rewritten and released in 2016
 2. No activity now
- ii. ASHRAE-15
 1. Subcommittee Voting on APR 6/27/17
- iii. ASHRAE-37
 1. SPC meeting on 6/28/17
- iv. ASHRAE-116
 1. Is being rewritten into ASHRAE-37
- v. ASHRAE-137
 1. This was reaffirm in 2017
 2. It was thought/hoped it would have been withdrawn
- vi. ASHRAE-206
 1. Relatively new standard
 2. This was reaffirm in 2017
- vii. SSPC 41 –Standard Methods for Measurement

1. ASHRAE - 41.1
 - Opened up and SPC is meeting
2. ASHRAE - 41.2
 - Has come back from public review. There are still some comments that need to be resolved.
3. ASHRAE - 41.3
 - 1st meeting with new SPC in Long beach
4. ASHRAE - 41.6
 - 1st meeting with new SPC in Long beach
5. ASHRAE - 41.11
 - 1st meeting with new SPC in Long beach
6. ASHRAE - 41.12
 - This SPC was disbanded. Having AD-HOC meeting that follows the SSPC 41 meeting to continue discussion of uncertainty for 41 series standards
7. ISO SC6 Working Group 1
 - ISO-5151, ISO-13253, ISO-15042
 - i. Out for vote should become national standard later this year
 - ISO-16358
 - i. Being revised to have seasonal values for high ambient environments.
8. SPC 205
 - Going out to APR. First three equipment area being addressed is chillers, unitary equipment, fan coil assembly.



Std_Report_June201
7_TC811 RevC.docx

12. Web site

Darin Nutter

- i. Nothing to report

13. Old Business

- a. Discussed the need to setup PPS for WS -1824.
 - i. Scott Creamer-Chair
 - ii. Chad Kirkwood, Kasey Worthington, Vance Payne, Rusty Tharp

14. New Business

15. Adjourn

- a. **Motion to adjourn.**
Meeting was adjourned at 6:10 p.m.

16.

VOTING MEMBERS FOR THIS MEETING (Need 7 for a Quorum)

Dutch Uselton	Chris Stone	Man Hoe Kim
Kevin Mercer	Ray Rite	Kasey Worthington
Roy Newberg	Dane Christensen	Rusty Tharp
Craig Messmer	Byron Horak	Sivakumar Gopalnarayanan