



MINUTES

TC8.11 Unitary and Room Air Conditioners and Heat Pumps

**2018 ASHRAE ANNUAL MEETING
Houston, TX**

**Monday, Jun 25, 2018: 4:15 – 6:30 PM
Location: 4th Floor, Grand A (Hilton)**

TC8.11 Subcommittee Meeting – Sunday, June 24, 3:00-6:30 pm – 3rd Floor, George R. Brown (Hilton)

Minutes

1. Call to order Messmer
Meeting was called to order at 4:15 p.m.
 2. ASHRAE Code of Ethics Commitment Messmer
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>)
 3. Introductions All
 4. Determination of a Quorum Messmer
 - a. Quorum was met. 12 of 12 voting members present.
 - b. Two first time attendees
 5. Announcements and Highlights Messmer
From TC Chairs Breakfast Meeting
 - a. Van Baxter received Andrew T Ball Award
 - b. It was encouraged for members/attendees to talk with the chair if you know of anyone that should be considered for an ASHRAE award.
 - c. For the ASHARE 125th Anniversary they are wanting/requesting articles/papers
 - i. Submissions due December 7th
 - d. It is encouraged for anyone not attending the conference to go and get a free TC only badge
 - e. Updated templates are now available on the ASHRAE website to be used for ASHRAE PPT.
 - f. July 9th Papers due for Atlanta
 - g. Aug 3rd Seminars due for Atlanta
 - h. Aug 21st Abstracts due for Kansas City
 - i. Nov 30th Papers due for Kansas City
 - j. ASHRAE Learning Institute is seeking new topics/course ideas
 - k. Chair asked members/attendees if there was any interest in doing remote participation
 - i. No interest was voiced
 6. Agenda additions All
 - a. No additions
 7. Liaison reports (as they arrive) Liaisons
 - a. MTG – Low GWP Refrigerants Useton
 - i. Three Current RP-Projects
 1. RP-1806
 - \$800K-- one of the largest ASHRAE has ever done.
 - Phase one of report has been submitted to PMS
 - Expecting to be at a decision point by/in October 2018
 2. RP-1807
 - This RP is in final review and should be available soon.
 3. RP-1808
 - All work completed and is in final review by PMS
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Low_GWP MTG
liaison report to TC8_
8. Approval of minutes from Chicago Messmer
 - a. Motion to approve Chicago draft minutes with correction/typo on page 3, Byron Horak Seconded by Ray Rite. **PASSED unanimously 11-0-0-0 CNV (chair not voting)**

9. Membership/Roster

Messmer

- a. New chair: Dane Christensen
- b. Rolling off: Craig Messmer, Ray Rite, Byron Horak, Kevin Mercer
- c. Rolling on: Chad Kirkwood, Chris Stone, Jeff Warther, Chad Bowers
- d. New Handbook Chair: Ted Duffy

10. Subcommittee reports

a. Programs

Jeff Warther

- i. No programs were sponsored by 8.11 in Houston
- ii. One Seminar was submitted for Houston, but was not approved
 1. Title: "Sizing and Performance in Hot and Humid Climates Including Low GWP Design"
 2. Reason for rejection not officially known, but it is expected it was due to another accepted program with similar topics
- iii. Atlanta track review
 1. System and Equipment
 2. Fundamentals and Applications
 3. Refrigeration
 4. Construction, Operation and Maintenance of High Performance Systems
 5. Common System Options and Misapplications
 6. Convergence of Controls, Indoor Air Quality and Energy Efficiency
 7. Building Integrated Renewables and Natural Systems
 8. The Engineers Role in Architecture
- iv. Kansas City Track Review
 1. Systems & Equipment in the Built Environment
 2. Fundamentals and Applications
 3. Optimization in HVAC&R
 4. Commissioning New & Existing Buildings
 5. Occupant Health & Safety
 6. Modeling Throughout the Building Life Cycle
 7. Professional Development
 8. Research Summit
 9. (Mini-Track): Radiant Heating & Cooling Mini-Track
- v. TC8.11 is a sponsor/supporter of Track 3 "Optimization in HVAC&R" in Kansas City
 1. A coordination meeting is scheduled for the Saturday after the Winter ASHRAE meeting in Atlanta (January 19th)
- vi. Discussion on potential seminar for Track 1 or 2 in Atlanta centered around the idea of dynamic/load based testing
 1. Title: "Current and New Development in Unitary Products Testing"
 - Abstract Due Date: August 3rd
 - Chair: Yunho Hwang
 - Possible Presenters:
 - i. Marshall Hunt or Rob Davis (PGE) – Load-based
 - ii. Pedro Perez (Kasey Worthington's co-worker) – Load-based (repeatability of testing)
 - iii. Jim Braun (Purdue) – Economizers
 - iv. Chris Stone's co-worker – 2023 efficiency M1 test conditions
- vii. Discussion on potential seminar for Track 5 in Atlanta centered around the idea of issues and faults on Unitary Equipment
 1. Title: "System Issue and Misapplications for Unitary Equipment"
 - Abstract Due Date: August 3rd
 - Chair: Jon Winkler
 - i. Glenn Hourahan (ACCA) – Fault Code detection, Zoning (Damper standard)

- ii. Hugh Henderson (Frontier Energy)
 - iii. Neal Walsh (Aeroseal)
- viii. Discussion on TC 8.4 putting together a technical paper session for Atlanta centered around the just finished up RP on fouling of outdoor heat exchangers. Since TC8.11 was/is a co-sponsor on the RP it would be advantageous that TC8.11 also co-sponsor this program for Atlanta as well.
- ix. Motion to sponsor all three above programs for Atlanta, Darin Nutter. Seconded by Byron Horak. **PASSED unanimously 11-0-0-0 CNV (chair not voting)**
- x. Discussion on TC3.1 putting together a seminar Centered around Low GWP Refrigerants. Chair voiced that TC8.11 is in general favor of support for this seminar.



ATL_KansasCity_Program Chair__Houston

b. Research

Eric Berg

- i. Highlights from Research Chair Breakfast
 - 1. 3 RTARs considered at the last RAC meeting
 - 1 accepted, 1 conditionally accepted, 1 rejected
 - 2. 3 WS considered at the last RAC meeting
 - All 3 conditionally accepted
 - 3. Service to ASHRAE Research Award nominee due September 30th
 - 4. Homer Addams Award nominee due December 3rd
 - 5. New Investigator Award nominee December 3rd
 - 6. Submissions to RAC deadlines:
 - Aug 15th
 - Dec 3rd
 - 7. Curtis Eichelberger is rolling off as Section 8.0 Research Liaison and Peter Armstrong will be the new 8.0 RL.
 - Curtis plans to set up a web meeting with Eric and Peter to do a formal hand off due to the large amount of RP going on in 8.11.
- ii. Current 8.11 RPs
 - 1. RP-1645
 - PMS has accepted the final report.
 - Hoping to have a seminar and/or conference paper session at one of the upcoming conferences.
 - 2. RP-1705
 - Presentation on project status/update given in 8.4 sub-committee meeting in Houston
 - Experimental work is done and first draft of report expect in July.
 - 3. RP-1721
 - Presentation on project status/update given in sub-committee meeting in Houston
 - Estimated to be approximately 9 months behind
 - Faculty/test setup very close to completion
 - Expecting to start collecting data by August
 - 4. RP-1733
 - Presentation on primary plan given in sub-committee meeting in Houston
 - Actual start date of RP is August 2018
 - 5. RP-1743
 - Presentation on project status/update given in sub-committee meeting in Houston
 - Preliminary results show that there is a sufficient effect on the performance of the unit/fan by moving the inlet duct from 30" to 16" from the floor.

- Both experimental and CFD work has begun and is ongoing
- Motion to give a five month no cost extension, Ray Rite. Seconded by Sivakumar Gopalnarayanan. **PASSED unanimously 11-0-0-0 CNV (chair not voting)**

6. RP-1785

- Presentation on project status/update given in sub-committee meeting in Houston
- The PMS is currently having monthly web meetings.
- A perimeter type sampling tree was developed/built to help minimize the localized disturbance on the air flow profile.
- Mass balance scale has been developed, but needs some refining to increase the accuracy to +/-1g
- PMS is expecting to review experimental data in Atlanta

7. RP-1824

- Currently RTAR approved
- WS very close to completion
- Hope to work on this and go out for letter ballot before the next deadline
- Next due date is August 15th

iii. Ideas

1. Room Stratification Impacts on Psychrometric Testing

- Scott Creamer had WS ready to submit but at last SPC 37 meeting changes were requested
- Scott is currently working on iteration 5.
- Hope to work on this and go out for letter ballot before the next deadline
- Next due date is August 15th
- A comment was made: A different form may be needed for this WS due to bypassing of the RTAR stage.

2. Filtration in mini splits and VRF system

- Lead by TC 2.4 and Tom Justice
- Expecting an RTAR submission soon
- Looking for volunteers from 8.11 to help with this

3. New 41.2 has been released, would like to compare the effects of the results based on the difference between this release, older versions and ASHRAE 37

- Chris Stone volunteers to lead the efforts to write WS.
- AHRI could possibly co-sponsor this RP

4. Oil Retention in MC HX

- Chad Bowers working on RTAR
- This is a co-sponsor opportunity with TC 8.4

5. Cyclic test result correlation based on unit design/configuration

- No action at this point

c. Handbook

Ray Rite

i. 2019 Apps

- Chapter 1: Residential was approved on March 6, 2018 by letter ballot 11-0-1-0 CNV and was turned into ASHARE on March 14 (due 4/12/18)

ii. 2020 - Handbook Systems and Equip

- Chapters 49: Unitary AC (Due: 7/4/2019) and 50: Room AC/PTACs (Due: 7/11/19)

2. New Liaison: Steve Sill

3. Volunteers:

- Chapter 49: Unitary AC - Ray Rite, Kevin Mercer, Skip Ernst, Bo Shen, Craig Messmer, Siva Gopalnarayanan, Mark Olsen
- Chapter 50: Room AC/PTACs - Ray Rite, Vance Payne, Bo Shen, Kevin Mercer, Chelsea Moussouni

- Ray Rite plans to work with Ted Duffy to insure a smooth transition for Ted as the new Handbook Chair.

d. Standards

Chris Stone

i. ASHRAE 221p

1. Rob Falke and Ben Lipscomb from SPC 221 presented on the new proposed Standard 221 "Test Method to Field-Measure and Score the Cooling and Heating Performance of an Installed Unitary HVAC System".
2. This standard is sponsored by TC 7.3 and has already gone out for public review and received close to 300 comments back.
3. Throughout the presentation a lot of discussion was had and multiple members/attendees of TC8.11 voiced a lot of concerns with this standard.
4. Total presentation/discussion duration was approximately 40 minutes
5. The chair has asked ASHRAE if TC8.11 can be a cognizance on this standard.
 - Response: It is possible to gain the cooperation of the SPC, but the only approval needed at this point for this STD to move forward is the already formed SPC.
6. TC 8.11 chair heavily encouraged members/attendees to try and get involved with this SPC and/or provide feedback as well as comments on public review drafts.

ii. ASHRAE 16 has combined with ASHRAE 58

1. Released in 2016
2. ASHRAE 58 withdrawn

iii. ASHARE 15.2

1. Monthly meetings have been scheduled and hoping for final Standard to be out by the end of 2018.

iv. SSPC 205

1. Nothing new to report

v. ASHRAE 37

1. Currently going through a major revision
2. Combining 37 and 116
3. APR Expected: 2019

vi. ASHRAE 137

1. Reaffirmed 2017

vii. ASHRAE 206

1. Reaffirmed 2017

viii. SPC 213p

1. Nothing new to report

ix. AHSRAE 41 series

1. Multiple ASHARE 41s are in the revision state.
2. Chris Stone encourage TC members/attendees to get involved with the SPCs for the 41 series Standards

x. ISO

1. Multiple ISO Standards relevant to this TC are very active.
2. Chris Stone encouraged TC members/attendees to get involved with the Standards



Std_Report_June201
8_TC811 RevB.docx

e. Web site

Darin Nutter

i. "Up to date"

11. Old Business

a. None

12. New Business

- i. New MTG has been formed Effective Building Operation (EBO)
 - 1. Chair wanted to see if anyone in TC 8.11 has interest?
 - No interest acknowledged

13. Adjournment

a. **Motion to adjourn.**

- i. Meeting was adjourned at 6:26 p.m.

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

Craig Messmer	Dane Christensen	Kasey Worthington
Ray Rite	Darin Nutter	Henry 'Skip' Ernst
Sivakumar Gopalnarayanan	Byron Horak	Kevin Mercer
Kishan Padakannay	Dr. Bo Shen	Dutch Uselton