

Minutes

2013 ASHRAE Annual Meeting Denver, CO

TC8.11 Unitary and Room Air Conditioners and Heat Pumps
Monday, January 24, 2013 4:15 – 6:30 PM
Location: Columbine room, Tower Building, Terrace Level (TT)

Sponsored Program

Sunday, June 23, 11:00am – 12:30pm, Plaza Ballroom E
Seminar 2: Investigation of Replacement Refrigerants for R410A and Test Results from the Alternative Refrigerant Evaluation Program (AREP)
Plaza Ballroom E
Chair: Ray Rite

Minutes

1. Call to order Payne
 - a. Meeting was called to order at 4:15 p.m.
2. Introductions All
 - a. Introductions were made.
3. Determination of a quorum Payne
 - a. Quorum was met. 8 of 11 voting members present
4. Announcements and Highlights Payne

From TC Chairs Breakfast Meeting

 - a. **Reviewers needed for NYC.** Van Baxter and Dutch Uselton volunteered. Others should contact Vance Payne if you want to be one.

Full report of announcements is attached.


SH Breakfast
Hndout DENVER 20:
5. Agenda additions All
 - a. Don Schuster from Trane will take over from Ray as research Chair. Don previously held this position for five years.
6. Liaison reports (as they arrive) Liaisons
 - a. Steve Duda: TAC representative Technical activities committee oversee section 8. No prepared remarks. No issues to discuss. If you need to contact Steve send an email to sh8@ashrae.net
7. Approval of Minutes from Dallas Messmer

Motion by Reid. Seconded by Darin Nutter. PASSED 7-0-1 (chairman abstained).
8. Membership/Roster Payne
 - a. Craig is rolling off as voting member. replace by LinJie Hwang
9. Subcommittee reports

a. Programs Ray Rite filling in for Kevin Mercer

- i. Denver (this meeting) we had one program (listed above)
- ii. Aug 13 is deadline for NYC seminars
- iii. Sep is deadline for Seattle conference papers
- iv. New ideas:
 1. Unitary product testing beyond existing standards. Quite a few topics:
 - Corrections to sea level. Dane potentially a conference paper and a few other ideas
 - Defrost performance (Howard)
 - Capturing digital compressor dynamics (Kasey)
 - Multi-split testing (Vance)
 - Testing of a 100% outdoor airContact Dane Christensen if you are interested in doing seminar or paper on this topic.
 2. Yunho has a paper that he submitted for NYC. Hugh also said that another TC has a several papers.
 3. Van is willing to chair a paper conference:
Two papers from Yunho, one from Hugh.
Motion to proceed: PASSED unanimously
 4. Yunho has two proposals for programs:
 - LCCP as a cosponsor,
 - Thermodynamic performance of low GWP refrigerants, Multi-disciplinary task group (MTGs)Motion (by Van Baxtor) to cosponsor both seminars, Darrin seconded. PASSED 7-0-1 (chairman abstaining)
 5. Vance will chair seminar in NYC. Wayne will give a presentation on multi function heat pump, Van will find another presenter; Carl Huber volunteered Bob Brown; Rusty suggested to ask Daikin to present something on their Altherma product. August 13.
 6. Other potentials: High ambient operation and impact on EER. Subtopics: impact of regional standards; compressor viewpoint (effect on operation); -- no interest in the room
 7. Van suggested that we consider a conference paper session on heat pump fault analysis – for Seattle. Abstract due sep. Hugh is interested – he did work on faulty ducts and other ideas; possible someone from NIST; Tital would be “Impact of Faults on Heat pump Steady State and Seasonal performance”. Van Baxtor will chair. Dane suggested that we try to get a paper from a manufacturer, for example, Carrier is using a capillary tube for checking charge. Send your abstract to Van Baxtor

The full programs subcommittee report is included below:



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Subcommittee Minute

b. Research Ray Rite

- i. Ongoing research
 1. RP 1508. Michael Pate, Grant Wheeler. Submitted a draft final report to the review committee last week and gave presentation to research subcommittee last night. Michael gave a four slide presentation today. Later they will submit a paper on this. Chad Kirkwood complimented the work and suggested that this work might lead to other research proposals. We granted a no-cost extension for six months at the subcommittee yesterday but they only need a Ray made a motion, seconded by Yunho to revise the extension to three months instead. PASSED 7-0-1 (chairman).

- ii. Proposed project 1608 – load based method of test for light commercial rooftop units. For example economizers, variable speed drives, and other control strategies. Six bids were accepted. The TC voted to recommend the bidder that was recommended by the review committee. Reed Hart is putting together a project review committee. Need three to five members. This project started in 2009 by Reed.
- iii. No work statements in progress.
- iv. RTARs
 - 1. oil return and retention in tubing, authored by Ray Rite. Motion by Darrin, seconded by Reid Hart, to accept this RTAR. Vote 7-0-1 (chairman) - PASSED
 - 2. TC 8.4 cosponsor, for accelerated corrosion testing was approved and went for bid. Rusty is on the PES. One bid received with evaluations due tomorrow. The PES had a teleconference last Thursday and comments due tomorrow. Rusty will forward to Ray the results received.
 - 3. Investigation of the fouling of outdoor heat exchangers. Cosponsored with TC 8.4. Purpose (objectives). To develop a method of test. Concerns to include field units that have fouling and to assess if performance is degraded. Ray will comment to the author about our concerns and ask them submit. Ray asked for a motion to cosponsor this work statement. Ray made the motion. PASSED 7-0-1. Ray asked if there any additional comments to send to him.
- v. New ideas or ongoing
 - 1. Eliminate cyclic testing (suggested by Eric Berg). Eric will decide whether to continue to bring this up.
 - 2. Chad will write a research proposal on the prediction of charge levels for heat pumps in heating and cooling modes. Applies to mix-match systems. Might lead to a heating mode prediction method, similar to linear curvefit. Ray reminded that charge modeling was a topic we discussed before but not much was done, or has been done recently. The goal is to predict how well the system works when flipping between the heating and cooling. Main problem is predicting the charge and subcooling in the heat exchangers.
 - 3. Chris Stone asked for input (suggestions). Plaza Court 3 – SPC 116 and 37. Both committees are trying to combine these two standards.

The full research subcommittee report is included below:



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- c. Handbook Dutch Uselton
 - i. Duct system comment by Mr. Garrett. We did not accept his full comment. We modified it by referring to other chapters on duct systems.
 - ii. Amr Gado expanded the controls section from one paragraph to nine. Dutch requested a motion to approve. Van made motion, seconded by Eric Berg – PASSED 7-0-1 (chairman)

Dutch is rolling off as handbook chairman. Lorenzo was really good at it. Maybe we can convince him to volunteer again. The next handbook is the Systems. Ray will volunteer. Chapters 49 and 50 for systems and equipment, Ch. 1 for applications which was just submitted.

- d. Standards Chris Stone

Chris Stone provided an update on the standards relevant to TC 8.11. The following is a short list:

- i. Group of standards. Packaged AC is almost ready. Standard 16/58.
 - ii. SPC 37 and SPC 116. First meeting was in Jan. No meetings since. Next meeting is Wednesday. To identify the research projects needed and drafting any revisions needed.
 - iii. SP 206 will be released this month
 - iv. Decided to keep the variable speed to be 1/3 the speed like std 116.
 - v. Recovery of water heater.
 - vi. ISO has been active, WG 1 (air source), 3 (water source), and 10.
 - vii. WG 1 is harmonizing nomenclature between all the relevant standards in its domain.
 - viii. Uncertainty document was released ISO 16491.
- The full report is included below.

- e. Web site Darin Nutter
Darin reported that the website is fully current and there are no problems to report.
Website is <http://tc811.ashraetcs.org/index.html>.

- 10. Old Business
 - a. None

- 11. New Business
 - a. International heat pumps. Solar cooling, heat and mass transfer. Abstracts sought.

- 12. Adjourn
Motion to adjourn by Ray, seconded by Yunho. PASSED (7-0-1).