

**Laboratory Method of Test of Fault Detection and Diagnostics
Applied to Commercial Air-Cooled Packaged Systems
Standards Project Committee 207P
Meeting Minutes**

Monday, January 14, 2019, 8am-10am – Houston

These draft minutes must be approved by this committee to be the official approved record.

Note: For votes concerning standards actions all members must be given an opportunity to vote. In the event all members are not present at the meeting a letter ballot will be sent to the absent members to vote, that will include all negative votes at the meeting and a Chair's response. In the event negative votes are received during the continuation ballot a recirculation ballot will be conducted.

Negative voters with comment on publication public review votes will be given an opportunity to appeal once the Board of Directors has approved the document for publication. Negative voters who do not comment **will not** be offered a right to appeal.

ATTENDEES

VOTING MEMBERS

Adrienne Thomle	X
Amr Gado, Pentair	
Caleb Joiner, Trane	X
Christopher Benson, Univ. Utah	X
Dale Rossi, FDSI	
David Guelfo, JCI	
David Shipley, Posterity Group	X
David Yuill, University of Nebraska	X
Dick Lord, Carrier	
Glenn Remington, Consumers Energy	X
Jan Peterson, XCSpec	
Jay Enck, CxGBS	
Jia Chang Huang, PG&E	
Jon Douglas, Kyser Warren	
Klas Berglof, ClimaCheck	
Kristin Heinemeier, Realized Energy Solns.	X
Liping Wang, University of Wyoming	
Mike Brambley, PNNL	X
Mikhail Gorbounov, Siemens Healthcare	X
Robert Mowris, Verified	
Sean Gouw, SCE	X
Vance Payne, NIST	
Vern Smith, Smith Energy Engineers	

LIAISONS, NON-VOTING MEMBERS, VISITORS

John House, JCI
Lee Millies, SPLS Liaison
Aniruddh Roy, Goodman
Bill Gnerre, Interval Data Systems
Piljae Im, ORNL
Guru Rav, Lennox

Minutes submitted by: Kristin Heinemeier, February 4, 2019

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Minutes approved on: [Date]

MAIN COMMITTEE MEETING MINUTES

SELF INTRODUCTIONS, ROLL CALL, MEMBERSHIP, LIAISONS

- Roll call: no quorum.
- Discussion RE membership attendance and process to maintain the roster, and ASHRAE process if a need to make changes becomes an issue.
- Les Millies (liaison) comments, congratulation for getting our APR comments. Discussion for next steps, and ASHRAE process and procedure. Importance of discussion in meeting or conference call and notation in meeting minutes prior to taking standard action so members have an opportunity for review.
- Approval of meeting minutes: no quorum, so not able to vote / approve. We now have (4) meetings of accumulated meetings where we have not had a quorum – letter ballot is proposed to address up this unfinished item.

ROADMAP FOR COMPLETION

- Roadmap for completion: we can do this fast track, not tied to a particular meeting date.
- Roadmap that was discussed, and agreed to:
 - Draft standard, responding to comments Mar 29
 - Written comments due Apr 12
 - Conference call to discuss any final changes Week of Apr 15
 - Send out final version and solicit email votes Apr 26
 - Email votes due May 10
 - Submit to ASHRAE for Public Review release May 17

DISCUSSION OF ADVISORY PUBLIC REVIEW COMMENTS

- Discussion of the APR comments process and comments: received 56 distinct comments from one building owner, one consulting engineer, one contractor association, one controls manufacturer, one FDD product manager, two HVAC manufacturers, and two national labs. We were happy to have such a good and diverse response.
- Discussion of table of comments:
 - #10. Committee members discussed and concluded in some instances a bench test would be a viable approach. Proposed wording is acceptable.
 - #34.2 Committee members discussed damper position setting and what would be a viable language approach. GTR proposed phrase “demand ventilation” be changed to “demand control ventilation” for clarity (listed in draft standard as an exclusion from test requirements. Lots of discussion RE why of minimum position mid-position and too open test definition – intent of test and how we language it. GTR suggest use of term “nominal” vs apparent ASHRAE forbidden use of “approximate” – after extended discussion of 10% “range” to be specified. A number of changes were proposed and captured by Adrienne in the next draft.

- #38 Suggestions seem to be the concern expressed in comment seems to be out of scope (quantitative flow desired, vs our test intent is related to position of damper not potential leakage), no change recommended.
- #22 Discussion about fault to be annunciated, and how does the standard intend to also diagnose cause – or are we? Several folks are questioning the notion of all three F – D – D phrases (3) in the TPS. Mike agreed to review the definitions of FD and FDD, and Kristin agreed to address wording about which type of alarm is required.
- #23 W TPS change may be out of scope, need to review for a left over editorial artifact.

DISCUSSION OF VERIFICATION

- Several individuals suggested a research project / RTAR could be started and fast tracked thru ASHRAE process to enable. David Shipley and GTR volunteered to try to pull together the RTAR – GTR suggest we each reach out to our respective committees for support (7.9 and 7.5). See notes from continuing discussion at 4:30 meeting.

MAIN COMMITTEE MEETING ADJOURN: 10:00

10:00 DRAFT REVISIONS WORKING GROUP MEETING

- Brief follow-up discussion RE framing the executive summary for RTAR. Further discussion deferred to 4:30.
- Continued discussion RE APR comments:
 - #16 Section 6.2 etal
 - Continued discussion RE various section test details and needs and language (sensors)
 - Continued discussion RE various section test details and needs and language (dampers and actuators)
 - Continued discussion RE various section test details and needs and language (air temperature boundary conditions and economizing process, how to deal with dry bulb, enthalpy, rationale of test, perceived possible use cases that would introduce constraints, test ambient(s), bench test / not bench test, and expected outcomes).

4:30PM VERIFICATION WORKING GROUP MEETING

Minutes submitted by: Kristin Heinemeier, February 4, 2019

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Minutes approved on: [Date]

- Resume discussion of the proposed RTAR and Public Review draft next steps.
- There was confusion about what had been proposed at the main committee meeting: Submit an RTAR for verification in parallel with completion of the draft and review process, so that results can be used to inform:
 - The final standard prior to publication.
 - A future update of the standard.

Need to clarify intent of committee.

- Adrienne moved to forward current completed draft to ASHRAE SPLS to move to Public Review process. GTR 2nd.
 - Discussion—substantial agreement.
- Adrienne moved to continue working on draft RTAR to have ready if / when we decide we need to advance it. GTR 2nd.
 - Discussion, we debate keeping it internal to SPC207p until committee approve the RTAR, share w 7.5 and / or 7.9 feedback when the time seems right.
- Decision:
 - Continue to bring draft to completion and move towards a vote for release for formal Public Review, along timeline discussed at full meeting.
 - In parallel, develop an RTAR for verification, to be submitted before, during, or after public review.