

**Laboratory Method of Test of Fault Detection and Diagnostics
Applied to Commercial Air-Cooled Packaged Systems**

Standards Project Committee 207P

Meeting Minutes

Monday, June 25, 2018, 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	
Christopher Benson, Univ. Utah	
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	X
Jon Douglas, Kyser Warren	X
Klas Berglof, ClimaCheck	
Kristin Heinemeier, Realized Energy Solns.	X
Liping Wang, University of Wyoming	X
Mike Brambley, PNNL	X
Mikhail Gorbounov, Siemens Healthcare	
Robert Mowris, Verified	
Sean Gouw, SCE	X
Vance Payne, NIST	X
Vern Smith, Smith Energy Engineers	X

LIAISONS, NON-VOTING MEMBERS, VISITORS

Aniruddh Roy, Goodman
Lee Millies, SPLS Liaison
Mark Alatorre, PG&E
Michael Deru, NREL
Paul Lin, Fridgewize
Scott Judson, NORESKO

MAIN COMMITTEE MEETING MINUTES

SELF INTRODUCTIONS, ROLL CALL, MEMBERSHIP, LIAISONS

- Round table introductions
- Roll-call and comments RE roster / SPC member participation / question of quorum (on-going).
- GTR made comment RE Technical Program Seminar 27 Supermarket Refrigeration System Diagnostics with our SPC207 Vice Chair chairing that seminar and also other SPC207 member or members are speakers in that program.
- Kristin outline and elaborate recent few months of conference calls and discussion / progress post-Chicago and related draft documents progress development that lead up to the meeting draft for discussion / consideration today (document cover sheet post-dated June 25, 2018 to coincide with meeting date).

REVIEW DRAFT

- Chair propose we use some time to break into a couple small group and re-review latest meeting draft and bring back comments and specific test plans ideas for group to consider as may be needed to update meeting draft.
- Reconvene from small groups for discussion:
- Group 1:
 - (some cross group comments between all groups also captured below)
 - 1: Second fault to be considered is more complicated than 1st fault, as simple pull a wire is easily enough, but notion of when economizing vs when not supposed to is more complex.
 - 2: May need to coincide with other similar tests like damper position test, how to correlate 40% damper position vs 40% outdoor air and two different things requiring iteration and complexities, so may need to be careful to not define damper position relationship to outdoor air is a new implied fact whereas it may not reflect actual field application use.
 - 3: Related concern expressed that damage not be done to unit being tested, for example vice-grips applied to damper actuator or damper assembly – discussion how to handle RE manufacturers potential issue of implementing the test.
 - 4: We had a discussion RE send it out acknowledging our observations and comments may come back from the reviewing public – else the other option is revise one last time prior to sending out. One is a committee prediction of the public comments; the other is making last pass edits to address them prior to public review.
 - 5: We do have some buy-in to making last minute changes to day, but consensus seems to be to by end of today wherever we are is what we go to advisory public review.
 - 6: Specific discussion RE section 6.5 entry paragraph to add “per manufacture recommended procedures, or in some such. A view was expressed to leave as is and change at a later date after public review. Group 1 and wider group in room

decided via vote (straw poll) to not make the discussed wordsmith changes at this time.

- Group 2:
 - 7: Cross reference between Title 24 and ASHRAE standard was reviewed, some observations of which party should be concerned with reconcile, left open to continued thinking.
 - 8: Some comparison of requirements between a couple sections (6.3 communicating and 6.4 not communicating), response was they are distinct separate because some actuators are communicating vs some are not (as reflected in italics). Option posed to add that distinction in current draft was discussed, or leave for later, group view seemed to stick with leave it for now, improve it later.
 - 9: There was an observation raised about continuity of procedure thru the 6.x section from one step to another that could be improved.
 - 10: Group 2 didn't think these changes should be made prior to public review.

- Group 3:
 - 11: Some comment RE damper position is 6.5 should be a percentage open for example less than 50% or greater than 50% for simplifying and minimize minutia confusion.
 - 12: Section 5.1 needs some further clarification, maybe change word "system to "unit"
 - 13: Section 4.3 apparatus measurement for accuracy and single fed fans being coded out of existence rather multi-speed / variable speed fans, maybe solution is to specify test should be conducted at a single speed (or converse would be manufacturer declared range of speeds?).
 - 14: There was a question RE source of temperatures specified in section 6.5 (feedback was not sourced from ASHRAE or anywhere else, rather temps were deemed as reflective of when an issue should be related to an alarm). This may be related to a former comment RE the temperatures and percentage damper position address suspect issues about by-pass air and other matters, but essence it to get to the issue of damper position itself being where it's supposed to be. Suggesting is to change to percent open and instead of say less than percent open – say closed, instead say percent outdoor air say open. Question raised RE damper closed vs minimum position.
 - 15: A follow up comment was made about subtle editorial glitches use of word determine and whether for continuity the sections being corrected for editorial readability being more clean.
 - 16: Reiterate section 6.x series of criteria related to item 14 and impacts to discussed changes.

VOTE TO RELEASE FOR ADVISORY PUBLIC REVIEW

- D Yuill, J Douglas, and JC Huang were able to join us at conclusion of their Program seminar # 27
- Some continued discussion RE note 14 with new members present.
- 17: Group consensus was regarding discussed changes, either (A) vote now for Advisory Public Review as-is, or incorporate discussed changes then do a complete re-review at a later date after opportunity for re-review by all voting members is arranged, then vote at a later date.
- We took a roster double check and it appeared we have 12 voting members present, appears we have a quorum.
- Motion (Brambley/Shiple): Release current meeting version of draft for Advisory Public Review with no-changes.
- Amended Motion: Release current meeting version of draft for Advisory Public Review with no-changes except to remove word “determine” from preamble sentences of 6.2 / 6.3 / 6.4.
- Amended motion carried: 12 YES, 0 NO, 0 ABSTAIN.

ADJOURN MAIN COMMITTEE MEETING

10:00 WORKING GROUP MEETING: PREPARING FOR ADVISORY PUBLIC REVIEW

- Attendees: Adrienne, Dave from Canada, Dave from Nebraska, Glenn, Jia, Jon, Kristin, Vance, Vern, Mark A.
- Procedure moving forward:
 - Kristin to send email to SPLS Liaison and Standards, requesting an Advisory Public Review, sending Standard, and requesting length of review.
 - The Standard should be released quite quickly afterwards by ASHRAE.
 - We are under no obligation to respond to commenters.
 - In parallel with ASHRAE notification of availability for review, committee members will personally solicit reviews from key stakeholders.
- Kristin will also get information on the ASHRAE mechanisms for notifying the public, and for receiving and tracking public comments.
- We brainstormed entities who should receive notice of the availability of the standard and solicit reviews, and assigned individuals to reach out to each these entities.
- We then discussed whether it is advisable to broadcast the solicitation widely or limit our outreach efforts to a handful of key stakeholders. ASHRAE will handle “public” notification, so we decided that it is better to reach out with a high-quality request to a smaller number.
- A Working Group will draft an email to be broadcast to our smaller number.
 - Volunteers to be on Working Group: Kristin, Dave from Canada, Glenn

- The Working Group will also develop a survey or list of questions we'd like reviewers to answer (we have a draft survey at <http://bit.ly/2sPDUqO> which might be a start).
- We will aim to send out the solicitation and survey/list of questions as soon as possible after the public review is announced.
- We will start having monthly conference calls (interim meetings of the full committee: hence, they require public notification by ASHRAE). Kristin to send doodle polls for the following conference calls:
 - In approximately 3 weeks. Objective is to review prioritized list of reviewers and solicitation email and survey.
 - Approximately one week after close of the Advisory Public Review period. Objective is to review comments and make a plan to move forward.
- We need a Working Group to review comments and prepare a summary or recommend revisions.
- This Working Group will also address the issues raised during our Main Committee Meeting (to be also informed by the review comments).
- Depending on the comments we receive, it should be possible to respond to comments and produce a draft that we are happy with, for a vote in January 2019.

6:30PM SUCCESSFUL VOTE FOR ADVISORY PUBLIC REVIEW CELEBRATION

