

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS, INC.
1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400
TC/TG/TRG MINUTES COVER SHEET**

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO 8.1 DATE January 26, 2016

TC/TG/TRG TITLE Positive Displacement Compressors

DATE OF MEETING January 26, 2016 LOCATION Orlando, FL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Scott MacBain	2014	David Bergeron	2013	See Attachment 1
Doug Collings	2012	Rick Hall	2013	
Heinz Juergensen (MNQ)	2013	Dr. Jason Hugenroth	2014	
Dr. Georgi Kazachki	2014	Andrew Welch	2013	
Dr. Margaret Mathison	2013			
Dr. Michael Perevozchikov	2014			
Michael Wegenka	2014			

DISTRIBUTION

TC:	All members of TC8.1
TAC Section Head:	Dustin Meredith
TAC Chair:	Thomas Lawrence
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Chis Wilkins – Section 8 Research Liaison Micahel Patton – Systems Handbook Chair James Aswegan – Standards Joseph Sanders – Technology Transfer Committee
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn

Call To Order - Scott MacBain

Scott MacBain called the meeting to order at 3:35 on Tuesday, January 26, 2016 in the Spring Lake Room in the Orlando Hilton. A sign-in sheet was circulated and is included as Attachment 1 to these minutes.

Establishment of a Quorum – Scott MacBain

A roll call was taken. Voting members present were Scott MacBain, Doug Collings, Heinz Juergensen, Georgi Kazachki, Margaret Mathison, Michael Perevozchikov, and Mike Wegenka. With 7 of 11 voting members present, a quorum was established.

Approval of the Chicago Minutes – Scott MacBain

Georgi Kazachki moved to accept the Atlanta minutes as amended and Mike Wegenka seconded the motion. The motion passed unanimously. (7-0-0, chair voting).

Liaisons

TAC Section Head – Dustin Meredith

Contact with any questions for TAC.

E-mail Sh8@ashrae.net with any questions for the section head.

No other liaisons were present.

From the Chair's Breakfast – Scott MacBain

- Congratulated Steve Duda, former TAC Section 8 Head, for receiving the 2015-2016 Hightower Award in recognition of his contributions to ASHRAE.
- Service to ASHRAE Research Award received no nominations from any of the TCs this year. Submission deadline is Sept. 1st each year. If this TC has a deserving candidate, consider nomination.
- Four new MTGs were formed since Atlanta: Avoided Source Energy Consumption, Impact of ASHRAE Standards and Technology, Indoor Swimming Pool Air Quality and Evaporation, and Occupant Behavior in Buildings. Alex Leyderman indicated that there might be significant interest in the ASEC MTG due to the use of vapor injection. Scott offered to nominate a TC 8.1 member to represent the committee in the MTG and will follow up with Alex and the MTG chair regarding membership. The MTG responsibility is expected to include development of research and technical programs.
- There is an updated TC website template and ASHRAE has requested feedback on its implementation. Craig Bradshaw explained that old template was HTML code, while the new template has a straightforward user interface. Also, membership lists are automatically populated. Craig has reviewed the website but requests feedback if anyone spots issues. Scott reminded attendees who were not members of the committee that the website includes a link to become a corresponding member.
- New e-mail aliases were created this year for all positions in the TC (subcommittee chairs, etc.). This will ensure continuity when contacting TC chairs.
- TAC is always looking for feedback on the technical programs, for example, with the process for submitting seminars. Contact TAC member Kelley Cramm at TACcoord2@ashrae.net if interested in providing feedback.
- The ninth beta test of remote participation meetings (RPM) is underway in Orlando to allow TC members to participate in meetings remotely. If a voting member foresees not being able to attend one of the TC meetings, let Scott or Margaret know so we can pursue this option to ensure quorum.
- Seminar and forum proposals for St. Louis are due Monday, 2/8.
- The current roster is in effect through the end of June, including the annual meeting. Use the “my

committees” link on your membership page of the ASHRAE website to access information on committee membership. This link also includes contact information for all committee members.

- RAC is prioritizing research topics related to the residential sector starting in 2015-2016, which will support Goal #3 of the research strategic plan.
- ASHRAE reminds members to update employment discipline in the online bio. Only 30% of TC members have updated their discipline. Scott has requested more information on how this is accomplished.
- The St. Louis conference will have eight tracks. See the website for details.

Standards – Margaret Mathison

Rick Hall has resigned from TC 8.1 but will remain active in the standards. Scott expressed his appreciation for Rick’s many contributions to this committee and the standards.

TC 8.1 is responsible for four separate standards.

- SPC 23.1-2010R, “Methods of Testing For Rating the Performance of Positive Displacement Refrigerant Compressors and Condensing Units that Operate at Subcritical Pressures of the Refrigerant.” Margaret Mathison is the Chair of this revision committee and revision work is progressing. New members and visitors are always welcomed. Orlando meeting will be held on Monday, January 25, from 2:15 – 4:15 PM in room S330F on the 3rd floor of the Orange County Convention Center.
- Standard 23.2-2014, “Methods of Test for Rating the Performance of Positive Displacement Compressors that Operate at Supercritical Pressures of the Refrigerants.” This new standard was published in 2014. Scott McBain was the chair of the revision committee that developed this standard. Standard 23.2 will be due for periodic maintenance (Revision, Reaffirmation, or Withdrawal) at the 2017 Winter Meeting in Las Vegas.
- Standard 41.9-2011R, “Standard Methods for Volatile Refrigerant Mass Flow Measurement Using Calorimeters.” Michael Perevozchikov is the Chair of this revision committee and revision work is progressing. The 41.9 Orlando meeting will be held on Monday, January 25, from 10 AM – noon in the Maitland room on the lobby level of the Hilton. New members and visitors are always welcomed.
- Standard 41.10-2013, “Standard Methods for Refrigerant Mass Flow Measurement Using Flowmeters,” was published in 2013. This standard is up for periodic maintenance at Orlando. SSPC 41 will recommend that 41.9 be Revised, Reaffirmed, or Withdrawn. SSPC 41 will meet on Sunday, January 24 from 1 to 4 PM in the Turkey Lake room on the lobby level of the Hilton. Visitors are always welcomed.

Program - Erik Anderson

- Orlando Seminar 65, chaired by Georgi Kazachki, will be presented tomorrow at 11:00 am in the Orange Ballroom D.
- Georgi reported that Seminar 37, which TC 8.1 co-sponsored, took place this morning; approximately 50 people attended and it was well reviewed. Georgi described the three presentations and reported that they were all well done and can be viewed online through the virtual conference.
- No seminars are in the works for St. Louis at this point. Contact Erik if interested in organizing a seminar or forum, and he will facilitate. Applications are due by 2/8/16.
- Tracks are set for St. Louis and Las Vegas and can be found under the “Conferences” tab of the website.
- Georgi reminded all that persistence counts when applying for programs and encouraged all TC members to consider proposing programs. Scott mentioned that Alex Lifson would be willing to serve as a presenter on relevant topics.

- Joe Sanchez suggested a seminar related to compressor mapping, which could leverage Alex Lifson’s expertise and interest from an AHRI task group. The seminar could include basics, AHRI study results, and how to interpolate compressor data. Georgi also suggests addressing what is the highest acceptable “end of compression” (not discharge) temperature. He proposed an intermediate seminar with the title, “Advancements in Compressor Design, Testing, and Performance Modeling for Alternative Refrigerants.” Potential speakers include Alex Lifson, John Neel, and Matt Cambio (compressor mapping). The AHRI study of interest was “AHRI Project 8013: A Study of Methods to Represent Compressor Performance Data over an Operating Envelope Based on a Finite Set of Test Data.” The study was completed in May and is in the public domain (http://www.ahrinet.org/App_Content/ahri/files/RESEARCH/Technical%20Results/AHRI-8013_Final_Report.pdf); this work could be presented by Justin Prosser. Georgi will chair and submit the seminar proposal for St. Louis; he will need a title, abstract (up to 200 words) and brief bio (4 sentences) from each presenter by February 2nd.
- Georgi moved to submit the seminar, Doug Collings seconded, and the committee voted unanimously to submit the seminar.
- Alex Leyderman proposes a basic level seminar that would target a broad audience, providing an introduction to different types of compressors. Craig Bradshaw will assist Alex in developing the seminar for Las Vegas.

Research – Michael Perevozchikov

- Because Michael was not able to attend the breakfast for research chairs, Greg Chilcote attended and reported back to the committee.
 - Chris Wilkins is the new Section 8 liaison.
 - Discussed the RTAR process at the breakfast.
 - Strongly encourage research liaison involvement before RTARs are submitted. This will help liaison answer questions during RAC review process.
 - Committees were reminded to review RTARs they are co-sponsoring, not to provide rubber stamp approval. Also, should provide reasons when there are abstentions and negative votes.
 - Work statement form has been modified. New form is online.
 - Reminder that research deadlines are 15th of May, August, December.
 - Of the RTARs that were evaluated, 5 were accepted and 4 rejected.
 - 1793-RTAR, which was co-sponsored by this committee, was accepted with comments. Rick Heiden is looking for volunteers to help with work statement. Alex Leyderman volunteered to help; Michael will communicate interest to Rick.
 - ASHRAE may use reserve funds to support AHRI roadmap for 2L.
 - Honors and awards (repeat from Scott’s chair breakfast) – No research awards because there were no nominations.
 - TC 3.4 has a work statement titled “Foamability Properties of Low-GWP Refrigerant and Oil Mixtures.” The draft has been given to their RAC liaison in preparation for submittal. Michael Perevozchikov motioned to co-sponsor, Doug Collings seconded, and the motion passed unanimously.
 - Chris presented two other work statements under development by TC 3.4.
 - Scott asked for motion for TC 8.1 to support submission of an RTAR in the area of steady and unsteady methods of oil circulation. However, the motion did not pass.
 - If you have ideas or an interest in the research subcommittee, please contact Michael Perevozchikov or attend the subcommittee meeting.
-

Handbook - Alex Leyderman

- Alex will send a draft of the chapter on dehydration, charging and testing to the committee for review; Eric Berg and Greg Chilcothe also indicated willingness to review.
- Chapter 42: Could not include information from Scott in draft due to deadline, but will include in next revision.

Membership – James Douglas

- Doug Collings is rolling off the committee. Jim Douglas and Alex Leyderman will roll back on July 1st.
- The question was raised as to whether more than one person per company can serve on the committee; Scott will ask for clarification from ASHRAE.
- Chris Seeton has volunteered to roll back on as well, which would give the committee 11 members starting July 1st.
- Scott MacBain will finish term as chair in July, Margaret Mathison will step up as chair, Michael Perevozchikov as vice chair, Drew Welch as secretary, Jim Douglas as standards chair, Craig Bradshaw as research chair, and Greg Chilcote as webmaster.
- Contact Jim if interested in signing up as a corresponding member or follow the link on the TC webpage.

Website – Craig Bradshaw

- Contact Craig with any corrections or suggestions for the website.
- Scott asked whether it would be appropriate to post seminar materials. Craig reported that the presentations from the last annual meeting have been posted and the new seminars from this meeting will also be posted.

Old Business – Scott MacBain

- No old business was re-introduced.

New Business - Scott MacBain

- No new business was introduced.

Motion to Adjourn - Scott MacBain

- No further business before the TC, a motion to adjourn was offered by Scott MacBain and seconded by Georgi Kazachki.

Attachment 1 ATTENDANCE LIST

TC 8.1 Attendance List – Chicago

Name	Company	Status
Scott MacBain	Carrier UTC	Chair/VM
Margaret Mathison	Marquette University	Vice Chair/VM
Alex Leyderman	Fairchild Controls	Handbook/CM
Erik Anderson	Anderson Engineering	Programs/CM
Michael Perevozchikov	Emerson Climate Tech.	Research/VM
Heinz Juergensen	Bitzer	VM
Craig Bradshaw	Torad Engineering	Webmaster/CM
Doug Collings	Tecumseh	VM
Jim Douglas	Imagineering and More	Membership/CM
Georgi Kazachki	DRS-ESI/Cryotherm	VM
Mike Wegenka	Trane	VM
Rick Bunch		CM
Michael Callan	Consulting Services Int'l	CM
Greg Chilcote	Trane – Ingersoll Rand	CM
Rupal Choksi	AHRI	CM
Rainer Grosse-Kracht	Bitzer	CM
Dwayne Johnson	Trane	PCM
Derek Kultgen	CPI Fluid Engineering	CM
John Neel	JCI – Frick	CM
Hermann Renz	Bitzer	CM
Eddie Rodriguez	Daikin	CM
John Scott	Natural Resources Canada	CM
Chris Seeton	Shrieve Chemical Products	CM
Eric Berg	Lennox Industries	Guest
Matt Cambio	Trane	Guest
Robert Chevasco	Shrieve	Guest
David Halbrooks	Bristol Compressors	Guest
Conner Hayes	Trane	Guest
Joe Sanchez	Bitzer	Guest
Vishal Sharma	ORNL	Guest
Lucas Stoller	Consulting Services Int'l	Guest
Detlef Westphalen	Navigant Consulting	Guest

Attachment 2: Code Of Ethics

ASHRAE Code of Ethics

(Approved by ASHRAE Board of Directors January 31, 2007)

As members of ASHRAE, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety and welfare.

Members and organized bodies of the Society shall be good stewards of the world's resources including energy, natural, human and financial resources

Our products and services shall be offered only in areas where our competence and expertise can satisfy the public need.

We shall act with care and competence in all activities, using and developing up to date knowledge and skills.

We shall avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.

The confidentiality of business affairs, proprietary information, intellectual property, procedures, and restricted Society discussions and materials shall be respected.

Each member is expected and encouraged to be committed to the code of ethics of his or her own professional or trade association in their nation and area of work.

Activities crossing national and cultural boundaries shall respect the ethical codes of the seat of the principal activity.