

**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 July 28, 2015

TC/TG/TRG TITLE Positive Displacement Compressors

DATE OF MEETING June 30, 2015 LOCATION Atlanta, GA

| MEMBERS PRESENT           | YEAR APPT D | MEMBERS ABSENT         | YEAR APPTD | EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE |
|---------------------------|-------------|------------------------|------------|----------------------------------------------|
| Scott MacBain             | 2014        | Dr. Jason Hugenroth    | 2014       | See Attachment 1                             |
| Dr. Margaret Mathison     | 2013        | Michael Wegenka        | 2014       |                                              |
| Andrew Welch              | 2013        | Heinz Juergensen (MNQ) | 2013       |                                              |
| Rick Hall                 | 2013        | Doug Collings          | 2012       |                                              |
| Alex Leyderman            | 2011        | David Bergeron         | 2013       |                                              |
| James Douglas             | 2011        |                        |            |                                              |
| Dr. Georgi Kazachki       | 2014        |                        |            |                                              |
| Dr. Michael Perevozchikov | 2014        |                        |            |                                              |
|                           |             |                        |            |                                              |
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|                           |             |                        |            |                                              |

**DISTRIBUTION**

|                                                                  |                                                                                                                                                                                                                           |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TC:                                                              | All members of TC8.1                                                                                                                                                                                                      |
| TAC Section Head:                                                | Stephen Duda                                                                                                                                                                                                              |
| TAC Chair:                                                       | William McQuade                                                                                                                                                                                                           |
| All Committee Liaisons As Shown On TC/TG/TRG Rosters:            | David Yasher– Section 8 Research Liaison<br>Michael Patton – Systems Handbook Chair<br>Rick Larson – Standards<br>Jim Tauby – SPLS liaison<br>Francis Mills – Special Pubs<br>Keith Reihl – Technology Transfer Committee |
| Manager Of Standards<br>Manager Of Research & Technical Services | Stephanie Reiniche<br>Mike Vaughn                                                                                                                                                                                         |

Note: "These draft minutes have not been approved and are not the official, approved record until approved by this committee."

### **Call To Order - Scott MacBain**

Scott MacBain called the meeting to order at on Tuesday January 27, 2015 in 307 in the Atlanta 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, Drew Welch, Jim Douglas, Michael Perevichikov, Georgi Kazachki, Rick Hall, and Margaret Mathison. With 7 of 12 voting members present, a quorum was established. Alex Leyderman joined the meeting after the establishment of quorum and Rick Hall left the meeting after the Standards Committee Report.

### **Approval of the Chicago Minutes – Scott MacBain**

An amendment was proposed to correct the wording of the description of co-sponsored Atlanta program from “Retrofit for R-32” to “Retrofit or Not? Life-Cycle Strategy for Systems with R-22 and High-GWP Refrigerants” and to correct the proposed seminar for “Compression Challenges for Low GWP Refrigerants” as a proposal for Orlando in place of Atlanta, and to correct the spelling of voting member Michael Perevozchikov on the cover page. Jim Douglas moved to accept the Chicago minutes as amended and Rick Hall seconded the motion. The motion passed unanimously. (7-0-0, 5 absent and the Chair voting).

### **Liaisons**

#### **Handbook Liaison – Scott Fisher**

Request for update for charging, dehydration, and testing for review and rewrite in this year.

#### **TAC Section Head – Stephen Duda**

There is a new web template coming that will be more engaging and make updates easier. It will also automate some maintenance of ASHRAE data like rosters.

Advice for being elected as the best TC in the section: greet new members and visitors, increase substantive contributions to research and programs.

Stephen Duda rolling off from Section 8 TAC Chair and Dustin Meredith will be replacing.

E-mail [Sh8@ashrae.net](mailto:Sh8@ashrae.net) with any questions for the section head.

#### **Section 8 Research Liaison – David Yasher**

The ASHRAE Presidential Residential Committee is looking for a speaker on compressor technologies that could have transformative impacts on residential equipment. Eckhard Groll was recommended – when he joined the meeting later, he accepted the contact information.

David Yasher is rolling off from Section 8 Research Liaison and Chris Wilkins will be replacing.

### **Standards – Rick Hall**

TC 8.1 is the 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.
- SPC 23.2P, “Methods of Test For Performance Rating Positive Displacement Refrigerant Compressors That Operate at Supercritical Pressures of the Refrigerant.” This new standard was published in as new 2014 and is due for periodic maintenance in January 2017.
- Standard 41.9-2010, “Standard Methods for Volatile Refrigerant Mass Flow Measurement Using Calorimeters.” Michael Perevozchikov is the Chair of this revision committee and revision work is progressing. New members and visitors are always welcomed.

- Standard 41.10-2013, “Standard Methods for Refrigerant Mass Flow Measurement Using Flowmeters.” This standard was published in 2013 and is due for periodic maintenance in January 2016. We expect to recommend revision to this standard to maintain consistency with 41.9.
- ASHRAE is initiating work on a new standard in the 41 series (41.12) as a standard method of uncertainty analysis. TC 8.1 is not cognizant for this standard, but members are encouraged to participate if it fits their expertise or interest.

#### **From the Chair’s Breakfast – Scott MacBain**

- ASHRAE has defined a new method for joining TCs as “Provisional Corresponding Member”. PCM can be requested directly on the website where they can be upgraded to CM after physically attending a committee meeting.
- ASHRAE has piloted electronic meetings with success for committees that have difficulty achieving quorum. If you would like for TC 8.1 to offer electronic meetings, please contact Scott MacBain.
- ASHRAE requests again that members update “employment discipline” in their bios, the participation rate in inclusion of this information is currently only 32%.
- TC 3.4 is in the process of starting a guideline that will serve as a users guide for ASHRAE Standards 97 & 99. The guideline was given the title 'Suitability of System Materials' and will be focused on material compatibility. TC 3.4 said they will be seeking input from TC 8.1 and other TCs to help develop the guideline.
- Nominations for the Hightower Award, meant to reward an outstanding individual for TC leadership and contributions. Scott MacBain to review if Rick Hall has previously won and nominate him if he has not.
- The committee is reminded that we are all subject to the ASHRAE Code of Ethics available at <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethids>, and reminded members to respect confidentiality and IP among all members.
- Seminar submissions are due to CEC by 8/10/15 for the Winter Meeting in Orlando.
- There were 104 seminar submissions for Atlanta, 66 were presented.
- Beginning in St. Louis in Summer of 2016, “invited” speakers will not be charged the conference fee. All speakers to include a new disclosure form with their presentation
- Speakers with ratings below 3.5 three times will be required to complete speaker training.
- If anyone is interested in becoming a Corresponding Member of TC 8.1, please provide your name and ASHRAE member number to Scott, Margaret, or Drew.

#### **Program - Erik Anderson**

- Atlanta Seminar: “Retrofit or Not? Life-Cycle Strategy for Systems with R-22 and High-GWP Refrigerants” was in the program.
- Conference website for Atlanta annual meeting: <http://www.ashrae.org/atlanta/>
- Share any program ideas with Erik
- Georgi Kazachki moved to resubmit co-sponsorship of previously submitted seminar for Orlando, “Best Practices for Refrigeration and Air Conditioning“, Michael Perevozchikov seconded. The motion passed unanimously. (7-0-0, 5 absent and the Chair voting)
- The seminar previously submitted and approved by the committee for Orlando “Compression Challenges for Low GWP Refrigerants” as suggested by Georgi Kazachki remains on the docket for TC 8.1 to be chaired by Georgi with Margaret Mathison, Craig Bradshaw, Eckhard Groll, and Vikrant as speakers.

#### **Research – Michael Perevozchikov**

- Michael reported the status of ASHRAE research:
  - 9 RTARs were evaluated, 7 accepted (4 with comments)
  - 8 Work statements evaluated, 4 Accepted + 1 Conditionally Accepted
  - 61 Active research projects (\$10 million)

- 11 new projects approved
  - 11 Projects completed
  - ASHRAE has more research money than new research proposals
- We discussed potential of co-sponsoring a work statement regarding testing to understand the modeling of heat dissipation in motors. Michael Perevozchikov made a motion to bring co-sponsorship of the work statement to a vote – seconded by James Douglas. The motion passed unanimously despite skepticism over the ambitiousness of the request. Alex Leyderman and Drew Welch offered assistance in support of the RTAR.
- If you have ideas or an interest in the research subcommittee, please contact Michael Perevozchikov or attend the subcommittee meeting in future meetings.
- Please bring any suggestions for new RTARs or improvements to the RTAR process to Michael Perevozchikov

#### **Handbook - Alex Leyderman**

- Chapter 42, Scott MacBain sent information on scroll chillers for the chapter “Liquid Chilling Systems”, but there may not be time to adequately incorporate it into the chapter. A letter ballot will be sent to approve what is available in the weeks immediately following this summer meeting..

#### **Membership – James Douglas**

- James Douglas accepted a two-year assignment as Membership Chair.

#### **Website – Drew Welch / Craig Bradshaw**

- We’re currently behind on updating the website for minutes and agenda. Drew has supplied the connection details to Craig to take control of the site.
- Craig will investigate posting presentations from Chicago seminar to committee website for those that couldn’t attend.

#### **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 was offered by James Douglas seconded by Michael Perevozchikov.

**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    |
| Andrew Welch          | Johnson Controls          | Secretary/VM     |
| Rick Hall             | Hall Consultants, LLC     | Standards/VM     |
| Michael Perevozchikov | Emerson Climate Tech.     | Research/VM      |
| Erik Anderson         | Anderson Engineering      | Programs/CM      |
| Craig Bradshaw        | Torad Engineering         | Webmaster/CM     |
| Jim Douglas           | Imagineering and More     | Membership/VM    |
| Georgi Kazachki       | DRS-ESI/Cryotherm         | VM               |
| Mike Wegenka          | Trane                     | VM               |
| Scott Fisher          | State Farm Mutual         | Handbook Liaison |
| Steve Duda            | Ross and Barzini          | Section 8 Head   |
| Bruce Griffith        | Johnson Controls          | CM               |
| Satheesh Kulankara    | Johnson Controls          | CM               |
| Derek Kultgen         | CPI Fluid Engineering     | CM               |
| Paul Flannigan        | Emerson Climate Tech.     | CM               |
| Hermann Renz          | Bitzer GmbH               | CM               |
| Eddie Rodriguez       | Daiken Applied            | CM               |
| Steve Spletzer        | Danfoss                   | CM               |
| Eckhard Groll         | Purdue University         | CM               |
| Michael Callan        | Consulting Services Int'l | PCM              |
| Greg Chilcote         | Trane                     | PCM              |
| Conner Hayes          | Trane                     | 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.