

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS, INC.
1791 Tullie Circle, N.E./Atlanta, GA 30329
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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 Jan 29, 2013

TC/TG/TRG TITLE Positive Displacement Compressors

DATE OF MEETING Jan 29, 2013 LOCATION Dallas, TX

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Matt Irons	2011	Bob Utter	2009	See Attachment 1
Jim Douglas	2011	Ward Wells	2009	
Rainer Grosse-Kracht(IM)	2009	Jason Hugenroth	2009	
John Tolbert	2011	Juergen Suess (IM)	2009	
Georgi Kazachki	2009	Alex Leyderman	2011	
Doug Collins	2012	Curt Slayton	2009	
Scott MacBain	2010			
Mike Wegenka	2008			
Bruce Griffith (arrived late)	2009			

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 Michael Patton – Systems Handbook Chair Rick Larson – Standards Jim Tauby – SPLS liaison Francis Mills – Special Pubs Keith Reihl – Technology Transfer Committee
Manager Of Standards Manager Of Research & Technical Services		Stephanie Reiniche 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 - Matt Irons

Matt Irons called the meeting to order at 3:37 pm on Tuesday Jan 29, 2013 in Trinity 1 of the Sheraton. Mike Wegenka volunteered to be secretary for this meeting. A sign-in sheet was circulated and is included as Attachment 1 to these minutes.

Establishment of a Quorum – Matt Irons

A roll call was taken. Voting members present were Jim Douglas, Doug Collins, John Tolbert, Matt Irons, Georgi Kazachki, Mike Wegenka, Scott MacBain, and Rainer Grosse-Kracht(IM). With 8 of 13 voting members present (including an International Member), a quorum was established. Bruce Griffith arrived after the quorum was established.

Approval of the San Antonio Minutes – Matt Irons

Jim Douglas moved to accept the Chicago minutes as written and John Tolbert seconded the motion. The motion passed unanimously. (8-0-0, 6 absent – 1 International and the Chair voting member)

Liaisons

Section Head – Stephen Duda

New TAC Presentation template for TC members to use with local Chapter. The new presentation template allows TC members, without a lot of effort, to give a presentation to their local chapter on TAC and the TCs in general and to also customize a few slides with information specific to their own TC or TCs. The template will then be posted to the Technical Committee page of the ASHRAE website for download. The presentation also includes a script that you use or alter as required.

Employment Declaration statement will be on the ASHRAE Bio system will have a pull down menu. ASHRAE encourages all members to go online to review their bio and provide necessary updates.

Steve indicated everything is looking good regarding administration of TC 8.1. The agenda was distributed on time and the web site is in good shape.

Handbook Rep - Michael Patton

Good news, we met our current Handbook deadline, Bad news: we have another one due in two years. Now we can get handbook and CD and pay for the online version. In the future we may be going to CD and online at no cost, a cost would be associated with a hard copy manual.

TC Chairman's' Breakfast Minutes - Matt Irons

- Lucas Hyman received the George Hightower Award.
- The 3rd beta test of Electronic and Present (E&P) meetings being Held in Dallas, which allows some TC members to participate in the TC meeting from a remote location electronically. The following TCs have agreed to participate in this test: TCs 1.5, 1.8, 2.2, 5.8, 7.4, 7.9, and 8.8. Feedback will be provided at the Denver meeting.
- Each TC to review the ASHRAE Code of Ethics – attachment #2 at the end of these minutes
- New multidisciplinary task group (MTG) cold climate design
- New ASHRAE Wiki is up and running, it replaces the terms and definition manual and you are encouraged to use it instead of creating your own terms and definitions. See ASHRAEwiki.org.
- List of other conferences and workshops in Attachment 3.

Standards – Rick Hall

TC 8.1 is the responsible for five separate standards.

- Standard 23.1 – Methods of Test For Performance Rating Positive Displacement Refrigerant Compressors and Condensing Units That Operate at Subcritical Temperatures of Refrigerants. This standard was published in 2010 and will come up for revision or reaffirmation in 2013. We will be asking the Society membership for members for the SPC and this TC will be asked to recommend a chair. A motion to revise 23.1 was made by Scott MacBain, second by Doug Collins. No discussion on this motion (8-0-0 approved, Chair Voting). A second motion was proffered to recommend a chair plus a minimum four people who have expressed interest in becoming members of this revision. Doug nominated Margaret Mathison(G), seconded by Scott MacBain. Vote approved (8-0-0 approved, Chair Voting). Shane Angle/ Mike Saunder(P), Jim Douglas(G), Mike Wegenka(P), Paul Flanigan(P), Drew Welch(U) volunteered to be members of the committee. There will probably be an organizational meeting in Denver for SPC 23.1-2010R.
- SPC 23.2 Methods of Test For Performance Rating Positive Displacement Refrigerant Compressors That Operate at Supercritical Temperatures of the Refrigerant. Scott will be ready for Public Review before March if all goes well.
- Standard.41.9 Standard Methods for Volatile Refrigerant Mass Flow Measurements Using Calorimeters. This will come up for periodic review in 2014. There is no activity at this time.
- Revision of Standard 41-10 Standard Methods For Refrigerant Mass Flow Measurements using Flowmeters. Shane Angle is the subcommittee chair. Public Review period will be completed on 2/7/13. If there are no substantive comments, it will move along the publishing process, otherwise it will be returned to the committee.
- The fifth Standards item is SPC-179P, Method of Test for Life Testing Positive Displacement Compressors. Bob Utter is the current subcommittee chair. They put out an Advisor Public Review (APR) after the San Antonio meeting and as a result of this initiative, the committee voted to disband on 12/12/12. Jim Tauby – SPLS liaison was present to confirm that TC8.1 agreed that SPC179 should disband. Georgi wanted discussion prior to the vote. This was an initiative to allow buyers to be more informed in compressor purchasing choices. Of the nine comments received from the APR and discussed in a web meeting on 11/9/12, no User Community comments were received. This SPC was started in 2003 and had many revisions over the last decade. There is a German standard but has not updated since 1979 and it is not being used. A motion was made by Doug Collins to confirm dissolution of SPC179, second by John Tolbert. Vote was 7-1-0 (Chair Voting) Georgi voted against because there was a lot of work that was done that will now be lost. Below is an excerpt from the last SPC179 meeting minutes that Georgi asked to be included in the TC minutes.

Georgi Kazachki offered these comments concerning his no vote: *The SPC was formed for a good reason which has not changed: to level the field for durability and life testing of refrigeration and air-conditioning compressors offered by all manufacturers by establishing a common standard for testing.*

- TC 1.11 Motor & Controls is working to create MOT for Rating Variable Frequency Drive test standard, a TPS for this will be available in 3/13. Doug Collins motioned that TC 8.1 to be co-cognizant for a new proposed standard for this MOT. Armin Hauer from TC 1.11 is the current champion of this effort. The vote was 8-0-0, (Chair Voting) to make TC 8.1 a co-cognizant committee for this new proposed standard.
- Anyone interested in reviewing the 50% Draft Refrigeration Commissioning Guide, contact Matt.

Program - Matt Irons

- Curt was absent. Matt Irons attended the Program Training session on Tuesday to represent TC8.1. Speaker fee will be \$95 in Denver and future conferences.
- Many seminars are rejected, we are not alone. Matt requested a reason for why they were rejected from the Track Chair, but we received no response. Conference Papers get assigned first, Seminars second choice, and then Forums.
- There was an email from the Chair of The Low GWP refrigerant MTG, Ken Schultz, to several TC chairs requesting to have all the results from the AHRI Low GWP Alternative Refrigerant Evaluation Program (AREP) made public via a seminar organized through the MTG. This would be the quickest path to disseminate the learning from the several companies that participated in AREP. The email asked that interested TCs and speaker names be sent to Ken Schultz in time to meet the Feb 11 deadline. Matt Irons said someone from his organization would present information and therefore would contact the MTG. No one else volunteered from TC8.1.
- Georgi requested on the behalf of the Refrigeration Committee co-sponsorship Practical Experience with low GWP and Natural Refrigerants in Supermarket Applications. He would also like presenters. Doug Collins made a motion for our co-sponsorship, John Tolbert second and the vote was (8-0-1)
- 2 hour Handbook & Research session would be used to coordinate new research ideas if Alex didn't want to use the time for handbook subcommittee. This would minimize time in the TC meeting to brainstorm any potential new ideas. Craig Bradshaw volunteered to assist Matt.

Denver Meeting - June 22-26, 2013

- Denver Seminar and Forum Session Proposals are due February 11, 2013
- All presentation files (PPT) due online – June 3, 2013

Tracks for Denver are as follows – go to <http://www.ashrae.org/denver/> explanation.

Track 1: Research- "Above & Beyond"

Track 2: Integrated Project Delivery (mini-conference)

Track 3: Building Energy Modeling vs. Measurement & Verification- Closing the Gap

Track 4: Mile-High Efficiency & Equipment

Track 5: Renewable & Alternative Energy Sources

Track 6: HVAC&R Systems & Equipment

Track 7: HVAC&R Fundamentals & Applications

New York Meeting – January 18-22, 2014

- Conference Paper Abstracts due March 15, 2013
- Technical Papers Due for Review – April 19, 2013
- Web Site Opens for Seminar and Forum proposals – June 3, 2013
- Final Conference Papers Submitted for Review – July 3, 2013
- New York Seminar and Forum Session Proposals are due August 12, 2013
- All presentation files (PPT) due online – January 3, 2013

Tracks for New York are as follows – go to <http://www.ashrae.org/newyork/> for more detailed explanation.

Track 1: Systems and Equipment

Track 2: Fundamentals and Applications

Track 3: Indoor Environmental Health/Indoor Environmental Quality

Track 4: Building Information Systems; Integrating Technology for Control, Management, Optimization and Efficiency

Track 5: International Design

Track 6: Improving Building Performance through Commissioning, Operation and Maintenance

Track 7: Hydronic System Design for Efficiency and Large Buildings

Track 8: Tall Buildings: Performance Meets Policy

Research – Matt Irons

- Matt Irons represented TC8.1 at the research breakfast. There was an innovative research grant. Five proposals were rejected during the spring. The Society is asking for more projects to be submitted. The number of RTARS and work statements being submitted is decreasing.
- Work Statement for 1642 “Improved Compressor Performance Modeling for Use in System Simulation Programs” needs to be adjusted per RAC, work is tabled by Ray Rite for now.
- RTAR 1628: “Properties Measurements of HFO-1234yf/Lubricant mixtures”. RTAR submitted Oct 2010. TC3.4 is sponsoring committee with 8.1 co-sponsoring . TC3.4 revising RTAR to include additional refrigerants. R32 and R1234ZE.
- Talked with Mark Adams from TC 8.2 about a project to determine how much oil is trapped in a flooded evaporator to become a co-sponsor. TC8.1 decided we were not interested to participate at this time.

Handbook - Matt Irons

- Alex Leyderman was absent from this meeting.
- Ch. 8 'Equipment and System Dehydrating, Charging, and Testing' is due in March, 2013. No additions or corrections, recommendation is to keep this Chapter as is. In February Alex will prepare the necessary paperwork and ask the Committee to approve it via letter/e-mail ballot. As per TC MOP, the motion and results of the vote shall be reported at the next meeting and recorded in the minutes.
- Per an email from Alex, Matt made a verbal request, that Alex still needs some support for Compressor and Liquid-Chilling System chapter improvement, for which revisions are due next year. The compressor chapter looks good, but still requires some updates on schematics and scroll information. We don't have a nice picture of rotary compressors.
- In Chapter 37 we need a section on over-and-under-compression in compressors. We also need to talk about Mach number effect because Chapter 37 is written by two TCs, 8.1 and 8.2. TC 8.2 talks about Mach number in their section, and we need to talk about it in ours.
- Most of the work is needed on Chapters 37 and 42. Scroll chillers are not there at all.

Membership – John Tolbert

- John solicited for new corresponding members. The new roster goes into effect on July 1 of this year and is good until July 1, 2014.
- Bob Utter and Ward Wells would like to step-down, we need a new secretary and Vice Chair. Doug Collins motion that Matt stay on for a third year, John Tolbert provided the second.(8-0-0, Chair Not voting) Margaret Mathison volunteered to be secretary starting at the Denver meeting. And Scott MacBain volunteered to become next Vice Chair.
- Rolling Off: Georgi Kazachki, Mike Wegenka, Jason Hugenroth, Ward Wells, Bruce Griffith, Scott MacBain, Curt Slayton, and Rainer Grosse-Kracht
- Rolling On: Margaret Mathison, Heinz Juergensen, Gene Fields, David Bergeron, Alex Lifson, Rick Hall, Drew Welch

Website - Drew Welch

- Drew Welch has posted the agenda for this meeting and the San Antonio meeting minutes and the website is current.

Old Business – Matt Irons

- No old business was re-introduced.

New Business - Matt Irons

- No new business was introduced.

Motion to Adjourn - Matt Irons

- With no further business before the TC, Doug Collins moved to adjourn. Scott McBain seconded and the motion passed (8-0-0, Chair not voting)

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.

Attachment 3: Upcoming Workshops and Conferences:

ACREX India 2013, March 7 – 9, Mumbai, India. Endorsed by ASHRAE. Contact ishrae_m@vsnl.net or www.acrex.in.

• **HVACR & Mechanical Conference for Professional Educators**, March 11 – 13, Colorado Springs, CO. Endorsed by ASHRAE. Contact 703-600-0308 or www.instructorworkshop.org

• **2nd IIR International Conference on Sustainability and the Cold Chain**, April 2-4, 2013, Paris, France. www.iccc2013.com.

• **Architectural Engineering (AEI) Conference**, April 3 – 5, State College, Pa. Endorsed by ASHRAE. Contact 814-865-6395, njs1@psu.edu, or <http://tinyurl.com/AEI2013>.

• **China Refrigeration Expo**, April 8 – 10, Shanghai, China. Endorsed by ASHRAE. Contact crexpo@biec.com.cn or www.tinyurl.com/3us47qv

• **ASHRAE Webcast, Assessing Building Energy Performance: From Principles to Practice**, April 18. Endorsed by ASHRAE. Contact (678)539-1200, ashraewebcast@ashrae.org, or www.ashrae.org/ABEPwebcast

• **International Workshop on Building and Ductwork Airtightness**, April 18 – 19, Washington. Endorsed by ASHRAE. Contact the Air Infiltration and Ventilation Centre at 32 2 655 77 11, info@aivc.org, or <http://tinyurl.com/ay9owvz>.

• **5th International Conference Ammonia Refrigeration Technology**, May 9-11, 2013, Ohrid, R. Macedonia, <http://www.mf.edu.mk/en/>

• **CLIMA 2013**, June 16 – 19, Prague, Czech Republic. Endorsed by ASHRAE. Contact 420 284 001 444, fax 420 284 001 448, clima2013@guarant.cz, or www.clima2013.org.

• **ECOS 2013**, July 16 – 19, Guilin, China. Endorsed by ASHRAE. Contact ecos2013-china@iet.cn or <http://tinyurl.com/d6s3gnk>.

• **CIAR XX**, July 22 – 23, Cartagena, Colombia. Endorsed by ASHRAE. Contact ciar2013@acaire.org or <http://tinyurl.com/CIAR2013>.

• **5th International Conference – Solar Air Conditioning**, Sep. 25-27, Black Forest, Bad Krozingen, Germany. Endorsed by ASHRAE. Contact: <http://solaircon.com/>

• **CLIMAMED**, Oct. 3 – 4, Istanbul. Endorsed by ASHRAE. Contact 90 3124194571, ttmd@ttmd.org.tr, or www.climamed.org.

• **IAQ 2013: Environmental Health in Low Energy Buildings**, Oct. 15 – 18, Vancouver, BC, Canada. Contact ASHRAE at 800-527-4723, ext. 1158, IAQ2013@ashrae.org, or www.ashrae.org/IAQ2013.

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• **11th International Energy Agency (IEA) – Heat Pump Conference**, May 12-16, 2014, Montreal, Canada. Contact: www.iea-hpc2014.org.

Paper Abstracts due April 15, 2013.