

ASHRAE TC 10.7

Commercial Food & Beverage Refrigeration Equipment

2017 ASHRAE Summer Meeting

Agenda for Monday, June 26, 2017, 2:15 pm - 4:15 pm

Renaissance Hotel Pike Room 1st floor Long Beach California

Note: The ASHRAE Code of Ethics is to be adhered to by those doing ASHRAE business whether or not they are an ASHRAE member. <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

1. Welcome & Introductions – Sign-In Sheets

2. Review and Revise Agenda

3. Determination of Quorum

4. Review Scope / MBO's

TC10.7 Scope: TC 10.7 is concerned with the application and performance of equipment and systems for the refrigeration of food and beverages in commercial operations. This includes commercial equipment such as refrigerated merchandisers and storage cases, walk-in freezers and coolers (<3000 sq. ft.), beverage vendors and dispensers, commercial ice makers, and water coolers.

TC10.7 MBO's (Objectives):

- The pursuit of technological advancement of commercial food and beverage equipment and systems to enhance overall performance through improved food safety, food quality, energy efficiency, and reduced environmental impacts.
- To provide engineering design, application knowledge, and technical expertise to effectively support research and the Refrigeration handbook chapters and standards for which we are responsible.

5. Recognition of Liaisons & Announcements:

Committee Liaisons:

- Section Head Jim Tauby
- Program Committee Liaison Kevin Gallen
- Research Committee Liaison John Shonder
- Handbook Committee Liaison Scott Fisher
- Chapter Technology Transfer Committee Liaison Gerald Hartford
- Standards Committee Liaison Cecily Grzywacz
- Refrigeration Committee Liaison..... Charlie Hon
- ALI/PDC LiaisonHugh McMillan
- MTG Low GWP Liaison..... Brian Fricke

Announcements

6. Membership:

Current TC10.7 Management Team

- Chair Charles Hon (VM 6/17)
- Vice Chair Timothy Anderson (VM 6/18)
- Secretary Lauren Zelinski (VM 6/18)
- Research Subcommittee Chair Shitong Zha (VM 6/19)
- Standards Subcommittee Chair Van Baxter
- Program Subcommittee Chair Caleb Nelson (VM 6/18)
- Handbook Subcommittee Chair Dave Demma
- Webmaster Kyle Larson
- Additional Voting Members:...Jon Murray (6/18), Carl Roberts (6/18), Pradeep Bansal (6/19), Patti Conlan(6/19), Cesar Lim (Non-Quorum 6/19), Gustavo Pottker(6/19), Daryl Erbs (6/20) and Massoud Neshan (6/20)

Tim Anderson will take over as the Chair on 7/1/2017. The Vice-Chair position needs to be filled.

Charlie Hon’s term as a voting member will expire after the summer meeting 7/1/2017. Are there non-voting members interested in moving to Voting Member status? (Brian Fricke and Dean Swofford asked of consideration)

7. Review Draft Minutes from the 2017 Winter Meetings in Las Vegas

8. Subcommittee Reports:

A. Program Subcommittee (Caleb Nelson) Meeting before ASHRAE being planned

Long Beach Session: Wednesday, June 28, 8:00 AM - 9:30 AM Seminar 50 Room: 201A (LBCC)

High Efficiency Commercial Refrigeration Systems with Natural Refrigerants

Sponsor: 10.7 Commercial Food and Beverage Refrigeration Equipment, Refrigeration Committee, TC8:1 Positive Displacement Compressors; TC3.1 Refrigerants and Secondary Coolants Chair: Georgi Kazachki, Ph.D.

1. **Doing It All Efficiently with CO2 Refrigeration Anywhere in the World:** Klaas Visser, P.E.
2. **Design and Performance Validation of Ultralow Charge Ammonia Cascade System for Retail Food Environment:** Masood Ali,
3. **Opportunities for Utilizing Two-Phase Ejectors to Increase Efficiency of Commercial Refrigeration Systems Using Natural Refrigerants:** Stefan Elbel, PhD
4. **Packaged Ammonia/CO2 Systems for Refrigeration:** Scott Mitchell,

Caleb Nelson plans to resubmit (not accepted for Long Beach) a proposal for Chicago.

Mitigating Refrigeration Impacts on the Grid: Chair Daryl Erbs PhD

Mini-Track Up-Date:The mini-track is one that will be developed by the Section and held at the Expo. It is listed on the Chicago webpage (<https://ashraem.confex.com/ashraem/w18/cfp.cgi>) as Track 9: Refrigerant Mini Track @ Expo.

The refrigerant mini-track is open and we may have submissions. However, this is mostly going to be sessions that the working group will determine are the ones they want to present. Those sessions will still have to be submitted to CEC and must be complete submissions that could stand on their own. We are providing a forum for the refrigeration/refrigerant committees to design a group of sessions at the AHR expo and be highlighted, while getting us back on the preferred schedule for a refrigeration track at the Winter Conferences.

B. Research Subcommittee (Shitong Zha)

Meeting: Sunday, 6:00pm-6:45pm, Renaissance Broadlind (2)

- RTAR 1706 – Minimum Refrigerant Charge Attainment for Commercial Refrigeration Systems : Shitong resubmitted update in March 2017
- RTAR 1722 – Optimizing Air Curtains for Refrigerated Display Cases with Glass Doors : plan to resubmit by Dec. 2017
- New potential RTAR: need to send to committee chair to vote after completion of the RTAR proposal.
- Understanding Commercial Refrigeration equipment frost load development and defrosting and how they relate to energy consumption and efficiency (SPC-210)
- Understanding single-compressor remote modulating refrigeration condensing units and how they realize energy savings and higher energy efficiency ratings (Potential cofounder: AHRI, DOE)
- RTAR 1779 - Optimization of air curtains in vertical display cases, incorporating horizontal air stream. RTAR to be rewritten prior to suggestion for resubmittal.
- RTAR 1786 MOT to determine pump load of secondary CO2 system
This RTAR was accepted. WS needs to be completed by August 15th for submission. Tim and Shitong to submit Work Statement for committee review and address the comments received on the RTAR. Potential request for cosponsor from AHRI or DOE.
- WS 1615 (TC7.5, with TC 10.7 co-sponsor) - Fault Detection and Diagnostic Methods for Supermarkets

New Project Ideas:

RTAR - DOE test according to ASHRAE Standard 72 and how instrument accuracies and input tolerances can affect the outcome of the test results and repeatability.

This could involve both analytical and testing. It was noted that ASHRAE 37 may be doing something similar and this should be considered when developing this RTAR. SPC 37 should be contacted and SSPC 72 should propose an RTAR for this. Lauren will reach out to the chair of SPC 37 to determine the status of this project and then report back to SSPC 72 and TC 10.7

Ad-Hoc Group – New technology assessment and application for energy efficiency in display cases (J. Murray, C. Roberts, R. Faramarzi)

The Ad Hoc Group's report will be circulated to the committee for review. Chairman Hon will circulate the report to the committee for review and comments and additions if the members feel there are areas not fully covered by the suggested topics.

Others Ideas?

C. Handbook Subcommittee (Dave Demma)

Meeting: Sunday, 6:45pm-7:30pm, Renaissance Broadlind (2)

Refrigeration, Chapter 15 – Retail Food Store Refrigeration and Equipment

Refrigeration, Chapter 16 – Food Service and General Commercial Refrigeration Equipment

D. Standards Subcommittee (Van Baxter)

TC10.7 is the Cognizant TC for the following standards:

SPC 18

Standard 29-2009, Methods of Testing Automatic Ice Makers (Daryl Erbs)

Standard 32.1-2004, MOT for Rating Vending Machines for Bottled, Canned and Other Sealed Beverages (Scott Mitchell)

SPC-32.2 Meeting *MOT for Rating Pre-Mix and Post-Mix Beverage Dispensing Equipment* (Daryl Erbs)

Meeting: Tuesday (6/27/17) 8:00 am – Noon LBCC Seaside 5B (SS1)

SSPC-72 MOT Open and Closed Commercial Refrigerators and Freezers (Jon Murray)

Meeting: Sunday (6/25) 1:00 pm – 5:00 pm Hyatt Shoreline A (1)

SPC 210 Meeting MOT/for Rating Commercial Walk-in Refrigerators and Freezer

Meeting: Monday (6/26) 8:00 am – LBCC Seaside 3A (SS1)

SPC 220P Method of Testing for Rating Small Commercial Blast Chillers, Chiller Freezers and Freezers

Meeting: Monday (6/36) 5:00 pm to 6:30 pm LBCC Seaside 4A (SS1)

9. New Business

Notes:

ASHRAE Winter Meeting Jan. 20-24, 2018 - Chicago, IL

ASHRAE Annual Meeting June 23-27, 2018 - Houston, TX

ASHRAE Winter Meeting Jan. 12-16, 2019 - Atlanta, GA

ASHRAE Annual Meeting June 22-26, 2019 - Kansas City, MO

10. Adjournment