

# ASHRAE TC 10.7

## Commercial Food & Beverage Refrigeration Equipment

### 2018 ASHRAE Winter Meeting

Agenda for Monday, January 22, 2018, 2:15 pm - 4:15 pm

Palmer House Hotel, Burnham 1 Room, 7th floor, Chicago, IL

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 Liaison .....Hugh McMillan
- MTG Low GWP Liaison..... Brian Fricke

Announcements

#### 6. Membership:

Current TC10.7 Management Team

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

**7. Review Draft Minutes from the 2017 Annual Meetings in Long Beach, CA**

**8. Subcommittee Reports:**

**A. Program Subcommittee** (Caleb Nelson)

Meeting: Sunday, 5:15pm-6:00pm, Palmer House Grant Park (6)

**Seminar 31: Disrupting the Status Quo with Natural Refrigerants**

Track: Systems and Equipment

Monday (1/22) 2:15pm – 3:45pm

Room: Chicago

Sponsor: 10.7 Commercial Food and Beverage Refrigeration Equipment, 10.3 Refrigerant Piping, Controls and Accessories

Chair: Shitong Zha, Member, Heatcraft, Stone Mountain, GA

**1. Micro-Distributed: A Simple Solution to Our Refrigerant Challenges**

*Tom Wolgamot, P.E., CPMP, Member, DC Engineering, Missoula, MT*

**2. Low Charge Ammonia Chillers for Broad Applications**

*Caleb Nelson, P.E., Associate Member, Azane, Inc., Missoula, MT*

**3. Piping Solutions for Natural Refrigerants**

*Chris Mueller, Associate Member, Mueller Industries, Memphis, TN*

**B. Research Subcommittee** (Shitong Zha)

Meeting: Sunday, 6:00pm-6:45pm, Palmer House Grant Park (6)

- 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.

#### **Others Ideas?**

##### **C. Handbook Subcommittee (Dave Demma)**

No meeting in Chicago

Refrigeration, Chapter 15 – Retail Food Store Refrigeration and Equipment

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

##### **D. Standards Subcommittee (Jon Murray)**

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

Standard 18-2008, Methods of Testing for Rating Drinking-Water Coolers with Self-Contained Mechanical Refrigeration

Standard 29-2015, Methods of Testing Automatic Ice Makers (Daryl Erbs)

Does TC 10.7 vote to Revise, Reaffirm, or Withdraw Standard 29?

Standard 32.1-2010, 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: ?

SSPC-72 MOT Open and Closed Commercial Refrigerators and Freezers (Jon Murray)  
Meeting: Sunday (1/21) 1:00 pm – 5:00 pm Palmer House Burnham 2 (7)

SPC 210 Meeting MOT/for Rating Commercial Walk-in Refrigerators and Freezer (Lauren Zelinski)  
Meeting: Monday (1/22) 8:00 am – 12:00pm Palmer House Burnham 4 (7)

SPC 220P Method of Testing for Rating Small Commercial Blast Chillers, Chiller Freezers and Freezers  
Meeting: Monday (1/22) 4:30pm – 6:00pm Palmer House La Salle 5 (7)

## 9. New Business

Is there interest in developing test standard(s) for salad bars, buffet tables, chef stands per DOE's recommendation in their public comments to Standard 72?

### **ASTM F2143 – 16 exists today:**

#### 1. Scope

1.1 This test method covers evaluation of the energy consumption of refrigerated buffet and preparation tables. The food service operator can use this evaluation to select a refrigerated buffet and preparation table and understand its energy performance.

1.2 This test method is applicable to electric self-contained refrigerators used for holding and displaying refrigerated food in an open area.

1.3 The refrigerated buffet and preparation table can be evaluated with respect to the following (where applicable):

1.3.1 Maximum power, or maximum current draw (10.1),

1.3.2 Thermostat calibration (10.4), and

1.3.3 Energy consumption (10.5).

### **Notes:**

Upcoming ASHRAE Meetings:

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

ASHRAE Winter Meeting Feb. 1-5, 2020 – Orlando, FL

## 10. Adjournment