

ASHRAE TC 10.7
Commercial Food & Beverage Refrigeration Equipment
Minutes of 2020 Summer Meeting
Monday, July 13, 2020, 2:00 p.m. - 5:00 p.m. ET
Web Conference

1. Welcome & Introductions

Chairman Brian Fricke welcomed the members and guests and called the meeting to order at 2:15 p.m. Members and guests introduced themselves. The Agenda was distributed, and a sign-in sheet was circulated. Mr. Fricke reminded everyone that the ASHRAE Code of Ethics must be adhered to by those doing ASHRAE business whether or not the participant is an ASHRAE Member. The Code of Ethics can be found at <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

2. Review and Revise Agenda

No changes were requested and the agenda was approved.

3. Determination of Quorum

Quorum was established with nine (9) of eleven (11) voting members present.

Members Present: Lauren MacGowens (6/23), Massoud Neshan (6/21), Brian Fricke (Chair, 6/21), Gustavo Pottker (6/20), Stephen Schaefer (6/23), Jeff Bauman (6/23), Daryl Erbs (6/21), Cesar Lim (6/20), Shitong Zha (6/20).

Not Present: Carl Roberts (6/23), Jon Murray (6/23)

4. 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. Liaisons & Announcements

▪ Committee Liaisons:

- Section Head: Charlie Henck

- Program Committee Liaison:.....
- Research Committee Liaison:..... Lorenzo Cremaschi
- Handbook Committee Liaison:..... Carlos Brignone
- Chapter Technology Transfer Committee Liaison:.....
- Standards Committee Liaison: Kwang Woo Kim
- Refrigeration Committee Liaison: Charlie Hon
- ALI/PDC Liaison:
- MTG Low GWP Liaison: Brian Fricke

Committee Liaisons were acknowledged and brief announcements were given.

▪ **Section 10 (Brian Fricke)**

Section 10 met to discuss how to possibly realign the TCs. Three options were presented to the to the TC chairs to review and present to their TCs.

- Option 0
 - o No changes to section 10. All Section 10 TC will remain as is.
- Option 1
 - o 10.A: Piping and Industrial Applications
 - o 10.B: Commercial Refrigeration Equipment
 - o 10.C: Applications
 - o 10.D: Transportation
- Option 2
 - o 10.A: Loads and Profiles
 - o 10.B: Components and Piping
 - o 10.C: Applications

After reviewing the three options presented, a motion was made by Daryl Erbs to express that TC 10.7 supports realignment Option 1 was made. The motion was seconded by Shitong Zha. The motion was approved unanimously. **Vote: 9-0-0-2.**

6. Membership

Current TC10.7 Management Team

- Chair:..... Brian Fricke (VM 06/21)
- Vice Chair:..... Vacant
- Secretary:..... Justin Sikorski (NV)
- Research Subcommittee Chair: Shitong Zha (VM 06/20)
- Standards Subcommittee Chair: Jon Murray (VM 06/23)
- Program Subcommittee Chair: Gustavo Pottker (VM 6/20)
- Handbook Subcommittee Chair: Dave Demma (NV)
- Webmaster: Kyle Larson (NV)

Additional Voting Members:

Cesar Lim (Non-Quorum 06/20), Jeff Bauman (06/23), Daryl Erbs (06/21), Lauren MacGowens (06/23), Massoud Neshan (06/21), Carl Roberts (06/23), Stephen Schaefer (06/23)

Proposed 2020-2021 Roster

Chair:..... Brian Fricke (VM 06/21)
Vice Chair:..... Stephen Schaefer (VM 06/24)
Secretary:..... Justin Sikorski (VM 06/24)
Research Subcommittee Chair: Vishal Sharma (NV)
Standards Subcommittee Chair: Jon Murray (VM 06/23))
Program Subcommittee Chair: Gustavo Pottker (NV)
Handbook Subcommittee Chair: Dave Demma (NV)
Webmaster: Kyle Larson (NV)

Additional Voting Members:

Cesar Lim (Non-Quorum 06/24), Ramiro Avila (06/24), Jeff Bauman (06/23), Daryl Erbs (06/21), Neil Monson (06/24), Massoud Neshan (06/21), Carl Roberts (06/23)

Justin Sikorski asked to step down from the Secretary position. Christian Bach volunteered to be the secretary. Mr. Bach will commence secretary duties at the next meeting.

7. Review Draft Minutes from the 2020 Winter Meeting in Orlando, FL.

A motion was made by Stephen Schafer and seconded by Cesar Lim to approve the Orlando meeting minutes. **VOTE: 9-0-0-2**

8. Subcommittee reports

A. Program Subcommittee (Gustavo Pottker, Chair)

There are two seminars planned for the winter meeting in Chicago. The deadline to finalize details is August 3. Gustavo will need the following information from all presenters: Title of presentation, Abstract, Contact information (will also need on-site contact information), Bio of presenter/author, Objectives, and Q&A information.

The current lineup for the two seminars is as follows:

Seminar 1 : Latest Developments in Low-GWP Refrigerants and Systems for Refrigeration

Chair: Georgi Kazachki

Presenters:

- 1) Neal Lawrence – Use of Low-GWP in container refrigeration **(CONFIRMED)**
- 2) Gustavo Pottker – Low-GWP Solutions for Commercial Refrigeration **(CONFIRMED)**
- 3) Mike Saunders – Presentation Title **(CONFIRMED)**
- 4) Riley Barta - Dynamic Analysis of Multi-Evaporator Transcritical CO2 Refrigeration Systems with Expansion Work Recovery **(CONFIRMED)**

Seminar 2: Safe transition to Flammable Refrigerants in Commercial Refrigeration Applications

Design changes, equipment changes, mitigation, standards development

Chair: Gustavo Pottker (still trying to find someone else)

- 1) Research Projects at AHRTI 9013, 9015 update (Xudong @ AHRI) **CONFIRMED**
- 2) Tim Anderson - Hussmann - use of flammable refrigerants from an equipment manufacturer's perspective **CONFIRMED**
- 3) Update on UL standards for refrigeration and air conditioning (Randy Hasemann) **CONFIRMED**
- 4) Update on standards development (Greg Relue - Emerson) **CONFIRMED**
- 5) Presentation on charge reduction (Elbel) **CONFIRMED**

A motion was made by to approve the two seminars for the Chicago program. The motion was seconded. The motion passed unanimously. **Vote: 9-0-0-2**

B. Research (Shitong Zha, Chair)

- **TRP 1831: *Validation of a Test Method for Applying a Standardized Frost Load on a Test Evaporator in a Test Chamber with an Operating Conditioning System***
 - Contact: MacGowens, Lauren <LMacGowens@ahrinet.org>, Detlef Westphalen
 - PES has recommended contractor: Creative Thermal Solutions
 - Full committee voted in favor of PES recommendation, via letter ballot (19 June 2020); recommendation has been forwarded to RAC for consideration

- **RTAR 1876: *Optimizing Air Curtains and the effect on the infiltration load of Refrigerated Display Cases with Glass Doors***
 - Contact: Mike Chieffo <Mike.Chieffo@zero-zone.com>; Carl Roberts <Carl.Roberts@zero-zone.com>
 - Resubmitted to Dr. Khalifa (RL) in Dec. 2018
 - Action: Accepted and waiting for a work statement

ACTION: MIKE CHIEFFO TO COMPLETE WORK STATEMENT

- **New RTAR - *Renewable Energy Electrical Grid Balancing Via Dynamic Commercial Refrigeration Equipment Energy Storage***

The proposed research is to develop an estimate of the potential for electrical grid energy absorption through conversion of electricity to frozen water or frozen brine by dynamic control of phase change storage incorporated into commercial refrigeration equipment. This research will encourage and facilitate the investment in smart grid enabled equipment with storage. It will be conducted through data collection and simulation modeling.

Contact: Daryl Erbs; Xudong Wang

The RAC liaison has not yet received the Work Statement.

ACTION: DARYL ERBS TO RESEND COMMUNICATIONS TO THE RESEARCH SUBCOMMITTEE PERSONNEL

C. Handbook (Dave Demma, Chair)

There are no updates on the handbook at this time.

D. Standards subcommittee (Jon Murray, Chair)

Standards:

TC10.7 is the Cognizant TC for the following standards and project committees:

- **SPC 18:** *Methods of Testing for Rating Drinking-Water Coolers with Self-Contained Mechanical Refrigeration*
No update was provided.
- **SPC-29** *Methods of Testing Automatic Ice Makers* (Daryl Erbs)
Was reaffirmed in 2018.
No update was provided.
- **SPC 32.1** *MOT for Rating Vending Machines for Bottled, Canned and Other Sealed Beverages* (Scott Mitchell)
Standard is up to date.
- **SPC 32.2** *MOT for Rating Pre-Mix and Post-Mix Beverage Dispensing Equipment* (Daryl Erbs)
Was published in 2018.
- **SSPC-72** *MOT Open and Closed Commercial Refrigerators and Freezers* (Jon Murray)
Was last published in 2018.
Hope to have a ballot version ready by September.
- **SPC-210** *MOT/for Rating Commercial Walk-in Refrigerators and Freezer* (Lauren MacGowens)
Under revision. Aiming for publication in early 2021.
Finally have a balanced committee. Draft based on AHRI 1250 Appendix C. Hope to have a clean version of the draft by the end of 2020. Committee is meeting once per month.
- **SPC 220P** *Method of Testing for Rating Small Commercial Blast Chillers, Chiller Freezers and Freezers* (Denis Livchak)
Oliver Ta is taking over as the committee chairman.

E. Website (Kyle Larson, Webmaster)

Add a hardcopy of the roster to the website. Updates to the website are needed.

F. ASHRAE Refrigeration Technology Committee for Comfort, Process, and Cold-Chain (Charlie Hon)

Charlie Hon introduced and discussed a new committee he is chairing called the ASHRAE Refrigeration Technology Committee for Comfort, Process, and Cold-Chain. This committee is replacing the ASHRAE Refrigeration Committee.

G. MTG Low GWP (Brian Fricke)

The MTG Low GWP subcommittee sponsored four research projects. Two of the projects are now complete and available for purchase in the AHSRAE Bookstore. The research project looking into Combustion Byproducts (1855) is nearing completion. The final project is studying the development of a Flammable Risk Assessment (1806). The work on this project is ongoing.

9. New Business

Charlie Hon announced that UL 60335-2-89 will be going out for public comment in the near future. In addition to incorporating the revisions found in the 2019 version of IEC 60335-2-89, the draft of UL 60335-2-89 is intended to incorporate several soon to sunset UL standards. The sunsetting standards include UL 471, UL 1995, UL 412, and UL 427.

10. Adjournment

The meeting adjourned at 3:35 p.m. ET

Upcoming ASHRAE Meetings:

- ASHRAE Winter Meeting Jan. 23-27, 2021 – Chicago, IL
- ASHRAE Annual Meeting Jun. 26–30, 2021 – Phoenix, AZ
- ASHRAE Winter Meeting Jan. 29-Feb. 2, 2022 – Las Vegas, NV
- ASHRAE Annual Meeting Jun. 25-29, 2022 – Toronto, ON

TC 10.7 ACTION ITEMS

Winter meeting 2019

| ACTION # | Responsibility | Summary of Action | Status |
|-----------------|-----------------------|--|---------------|
| 1 | Mike Chieffo | Complete Work Statement for RTAR 1876 | |
| 2 | Daryl Erbs | Resend communications to the research subcommittee personnel | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |