

Tuesday, February 1<sup>st</sup>, 2022

3:30 to 5:30 PM PST

Location: Caesar's Palace, Milano I-III (P) and GoTo Meeting

Scope: TC 10.2 is concerned with the application of refrigeration systems for precooling, processing, manufacturing and storage of foods, beverages and other products, including the understanding and procedures for calculating design and hourly refrigeration loads, as well as system energy usage. This TC includes the application of equipment and systems for ice manufacturing and ice storage, as well as ice skating and curling rinks. This scope excludes walk-in freezers and coolers <3,000 sq. ft. and ice making systems less than five tons of ice per day.

AGENDA:

1. Call to Order
2. Roll Call
  - a. Review of Roster - Officers/Subcommittee Chairs
3. Establish Quorum
  - a. Voting Term
  - b. Officers
    - i. Chair Tom Wolgamot VM 2022 - present
    - ii. Vice Chair Eric Ramon VM 2023 - present
    - iii. Secretary Cam Klein - present
    - iv. Webmaster Cam Klein - present
  - c. Subcommittee Chairs
    - i. Research Doug Scott VM 2024 - present
    - ii. Programs Richard Love - present
    - iii. Handbook David Gauvin – not present
    - iv. Standards Greg Scrivener VM 2022 – not present
  - d. Other Voting Members
    - i. S.A. Sherif VM 2022 – not present
    - ii. Art Sutherland VM 2024 – not present
    - iii. John Gallaher VM 2022 - present
    - iv. Nick Shockley VM 2023 - present
    - v. Danny Halel VM 2023 - present
    - vi. Kathleen Neault VM 2024 - present
    - vii. Jim Caylor VM 2023 - present
  - e. Other attendees
    - i. Alfredo Oliveira
    - ii. Bill Kumpf
    - iii. Charlie Henck
    - iv. Danny Halel
    - v. Eric Smith
    - vi. John Scott
    - vii. Kathleen Neault
    - viii. Kyle Hasenkox
    - ix. Mike Saunders
    - x. Mohammad Quandil
    - xi. Nick Shockley
    - xii. Michael Petersen
    - xiii. Stephen Spletzer
      - i. Wayne Borrowman
      - ii. Adam Shirley

2. Code of Ethics
3. Liaison Reports
  - a. Charlie Henck – Complete forms (color coded)
  - b. Roster is good through June 30, 2022. New roster is due by Feb 15<sup>th</sup>. Try to think about future leadership and overall committee diversity. Keep website and basecamp up to date.
  - c. TC needs to vote to continue. Minutes are due 60 days after this meeting.
  - d. Try to have virtual meetings before Toronto
  - e. Programs are due February 17<sup>th</sup>
4. Section Head
  - a. Section head breakfast - Want TCs to be aligned with society goals (see last page of minutes)
5. Vote to continue activities as a Technical Committee
  - a. Danny Halel – motion to continue. Second by Doug Scott. All in favor, none opposed. Motion passes.
6. Subcommittee Reports
  - a. General Committee Expectations
  - b. Handbook – David Gauvin
    - i. Chapter 43 – Ice Manufacture
      1. Slipped through the cracks in the committee merger/restructure.
      2. Was revised for the 2018 refrigeration handbook. Hadn't been revised in a while. Industrial Ice Machines haven't changed in a long time. Didn't have a lot of experts in that specific field but managed to get a input from a few people in the field. There is some legacy information on HFCs – 507 or 404a. Doug doesn't think now is the time to update the refrigerant-specific language – wait until one emerges as a leading refrigerant. Intent is to update in the 2026 publication. Committee agreed that at this time, it is not critical to revise the chapter and it can be reposted as is.
      3. Eric Smith motion to approve Chapter 43 as is. John Gallaher second. No abstentions. Motion passes.
  - c. Research - Doug Scott
    - i. Doug Scott
    - ii. ASHRAE is generally behind on funding research projects due to shortfalls in funding. Finding co-funding will help get things approved.
    - iii. Refrigerated warehouse work statement – WS1915.
      1. Was reviewed by research liaison prior to last edit.
      2. Doug is confident it is where it needs to be.
      3. Eric Smith – suggesting NRF (formerly ARF) as a co-funder
      4. Doug will go look for co-funding for the program or host sites.
      5. John Scott motion. Kathleen Neault second. No abstentions. Motion passes.
    - iv. Dock doors
      1. Already rolling along. Doug will keep this moving.
    - v. Warehouse ventilation – 62.1 problem ventilating spaces
      1. Recall IAQ is a pillar in the research plan.
      2. Some freezers have few people, but lots of product potentially off gassing.
      3. Eric Smith: Note 62.1 moved their ventilation requirements to the IMC, which now calls out refrigerated warehouses at 10 CFM/person. How will this be addressed?
    - vi. Air infiltration
    - vii. Research project for defrost effectiveness. Frost regimes. Some studies exist but have been focused and small in scale. Many notes on this but no ARTR.
    - viii. Decarbonization/Electrification
      1. Some high level talks, but nothing concrete yet.
    - ix. Could do 2 of the above. Decided that dock doors and ventilation are the two top priorities.
  - d. Programs
    - i. Richard Love proposes a subcommittee meeting for next week.

- ii. Richard will send a meeting invite for next Monday.
    - iii. Brainstorming training programs and items for the next winter meeting.
  - e. Standards Greg Scrivener – Not present, no update.
    - i. Eric Smith – ASHRAE 15 working on about a half dozen addenda. Most pertaining to A2L use in commercial and residential applications. Trying to coordinate with UL 60335-2-40 residential and 60325-2-89 commercial standards. 15.2 is a new standard – nothing has been published in whole yet, but have seen public reviews and comments. Near being published.
    - ii. The committee we should start considering decarbonization and resilience.
      - 1. Considering opportunities to recover refrigeration waste heat for heating. Multiple stages, desuperheaters, etc. These are potential avenues for Committee 10.2 to research.
        - a. Danny Halel points out some regions (California) are mandating heat reclaim – this sounds great but in cold ambient conditions may require increasing elevating condensing pressures, or adding a third stage to boost.
        - b. Kathleen points out there are likely opportunities with ice rinks.
        - c. Supermarkets are another opportunity. In early 80's most supermarkets had heat reclaim, but when CFCs were banned and charges were decreased, the heat reclaim went away.
        - d. Idea for programs – “Lost Technology” of heat reclaim and a case study of how to bring it back to prominence.
7. Upcoming Meetings
- a. 2022 ASHRAE Annual Conference
  - b. June 25-29, 2022 | Toronto, ON, Canada
8. Other Items (Open Call)
- a. Basecamp
    - i. Add all attendees to basecamp.
  - b. How can we better look at energy? Alternate refrigerants in systems?
  - c. Tom will send out a meeting invite to discuss additional ideas for the Committee to pursue.
  - d. Committee strongly prefers to retain the option for hybrid technical committee meetings. This is a major boon for committee members who cannot necessarily make the conference.
9. Roster
- a. Interested in becoming voting members:
    - i. Wayne Borrowman
    - ii. Alfredo Oliviera
    - iii. John Scott
  - b. Officers:
    - i. Tom Wolgamot remaining on as Chair.
    - ii. Eric Ramon: remaining on as Vice Chair
    - iii. Wayne Borrowman rolling in to replace Cam Klein as Secretary.
    - iv. Cam Klein remaining on as Webmaster
10. Adjournment
- a. Doug Scott motioning to adjourn. John Gallaher seconds. Meeting adjourned.
11. Other Key Meetings:
- a. TC Chairs' Training Breakfast
    - i. Sunday, January 30, 2022 7:00 AM – 9:00 AM PST Caesars Palace, Palace I/II (E) Hybrid meeting
  - b. The Handbook Training Workshop will be held virtually
    - i. Wednesday, January 26, 2022 10:00 AM – 11:00 AM PST
  - c. The Research Subcommittee Chairs Breakfast meeting (in person)
    - i. Monday, January 31, 2022 6:30 AM – 9:15 AM PST Caesars Palace, Palace I/II (E)
  - d. TC Section 10 Program/Research Joint Subcommittee Meetings
    - i. Monday, January 31, 2022 2:30-4:30

- ii. Caesar's Palace, Imperial Boardroom
- e. TC Program Subcommittee Training (in person)
  - i. Tuesday, February 1, 2022 11:15 AM – 12:00 PM PST Caesars Palace, Milano VIII (P)

#### Code of Ethics

"As members of ASHRAE or participants in ASHRAE activities, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

We will avoid conflicts of interest and behavior that is discriminatory and/or harassing."

#### 2019–2024 ASHRAE Strategic Plan

- Mission - To serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields.
- Vision - A healthy and sustainable built environment for all.
- Values – Excellence, Commitment, Integrity, Collaboration, Volunteerism, Diversity

#### Goals:

1. Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment
2. Maximize Member Value and Engagement
3. Optimize ASHRAE's Organizational Structure to Maximize Performance

#### Strategic Plan Areas and Initiatives:

##### Initiative Area: Built Environment of the Future

- a. Resilient Buildings and Communities
- b. Indoor Environmental Quality

##### Initiative Area: Future of ASHRAE

- c. Organizational Streamlining
- d. Improve Chapter Engagement, Capacity and Support