



1791 Tullie Circle, N.E./Atlanta, GA 30329

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TC/TG/MTG/TRG MINUTES COVER SHEET

(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/MTG/TRG No. 10.1 DATE February 3, 2020

TC/TG/MTG/TRG TITLE Custom Engineered Refrigeration Systems

DATE OF MEETING June 24, 2019 LOCATION Kansas City, MO

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Kent Perkins	2016	Kent Anderson	2016	
Doug Scott	2017	Brian Blahey	2017	
Adnan Ayub	2018			
Jim Young	2017			
Bill Brayman	2016			
Jim Caylor	2018			

DISTRIBUTION: *All Members of TC10.1 plus the following:*

TAC Section Head: Charlie Henck	SH10.1@ashrae.net
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	See ASHRAE email alias list for needed addresses.
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

1. Meeting was called to order by Kent Perkins.
2. Introduction of members and guests.
3. A quorum was established.
Voting Members: Kent Perkins, Doug Scott, Brian Blahey, Jim Young, Kent Anderson, Bill Brayman, Adnan Ayub, Jim Caylor
Present: Adnan, Kent P., Doug, Jim, Bill, and Jim Young
Absent: Brian and Kent A.
4. Code of ethics was read by Kent Perkins.
5. Meeting Minutes
Vote on Meeting Minutes for Atlanta, Motion to accept minutes: (5-0-1)
Abstain: Jim Caylor since not available at Atlanta meeting.
6. Report from section head meeting – reference breakfast meeting notes.
7. Liaison Reports
 - A. Section Head – James Tauby
Update from TAC concerning the TC reorganization and TC 10.1 discussion:
 - The original plan was to reduce from 100 to 35 TCs, but now the plan has relaxed. The TCs should review opportunities to merge during their regular meetings. Jim questioned if Section 10: 1, 2 & 3 could be merged. He also stated that TC10.8 was having trouble establishing a quorum. Merging can be also across sections if there is a good fit.
 - Jim discussed conducting a conference call the 2nd week of July to review possible mergers and the possibility for a new TPS.
 - There may or may not be 10 sections remaining after combining TCs. By Austin, everyone should know the plan. There may be one chair for all section 10, then three or four vice chairs (one in each section) who will report to the chair. That is just the idea per Jim.
 - Doug Reindl shared concerns about reduced attendance. Some employers will only send employees to committees if they are voting members. Combining committees could reduce the amount of voting members within ASHRAE.
 - Jim commented that meeting space can be expensive; ASHRAE is trying to cut costs. Also, there have been concerns with programs being rejected due to available time and space.
 - TAC is to work with CEC to look each program as submitted.

- Some TCs are conducting seminars within their meeting time slot; Jim said ASHRAE has no problem with that.
- Kent Perkins stated that it is up to the TCs to determine the possible mergers. Jim said that ASHRAE is still trying to push for reorganization.
- Doug Reindl suggested having a single section 10 meeting covering all the breakfast meeting information. There is no need to repeat this information in every TC 10 meeting.
- Bruce Griffith suggested the possibility of combining all the section 10 TCs based on functions like research, handbook, standards, etc. to cover all refrigeration.
- Greg Scrivener agreed that one core section 10 meeting would be beneficial which could reduce each committee meeting to one hour.
- Jim agree to set up a teleconference for further discussion.

B. Research – Not in attendance.

C. Others – None.

8. Committee Reports:

A. Handbook – Dan Dettmers – Dan was absent, thus need to coordinate with him about the upcoming deadlines.

- TC 10.1 is responsible for chapters 4, 5, 13, 45, 46, 47, 48, 49, 50
- Discussed 3 chapters to be reviewed:
 - Eric Smith: Substantial rewrite of overfeed systems; taking correlation and data. Reference the IIAR March conference online for correlations. Both Eric and Adnan Ayub will do chapter 4.
 - Chapter 5 needs a major rewrite. Doug Scott will lead the effort and Greg Scrivener agreed to assist.
 - Not much change happened in chapter 13 but may add dynalenes or others (Bruce will review).

B. Research – Doug Scott

- Defrost Loads – How to determine when to initiate and terminate defrost cycles for energy considerations. Possible co-sponsor with section 10.8. Ideas included frost regimes, quantity of heat for melting ice, possible design guide for defrosting with CO2 systems, pulse hot gas defrost, hydrophobic coatings.
- Liquid separation in vessels – Doug would like to move ahead but does not have anything written up yet. Couldn't get original work statement yet. Eric Smith stated that 10.3 is currently working on that. Bruce asked for RTAR number, Eric replied by saying 1513 (old).

- Doug provided an update from RAC – 7 RTARs submitted, 1 accepted, 2 accepted w/ comments, 13 work statements submitted, one accepted, 5 conditionally accepted.
- Eric stated that CFD analysis has opened up the possibility for many applications.

C. Standards – Greg Scrivener

- SSPC 15 met on Saturday (6/22) from 1 pm until 4 pm, Sunday (6/23) from 9 am until noon (working committee) and from 1 pm until 5 pm.
- Summary of continuous maintenance:
 - Addendum – F factor tables. The committee voted to send out for public review.
 - Addendum d – new section 7.6 for class A2L refrigerants located in or directly serving occupied spaces (human comfort).
 - Addressed comments to the second public review and the committee is working through additional changes prior to sending out for a third public review.
 - Changes made to regulate both occupied and unoccupied spaces due to flammability (ex. Piping through spaces).
 - Addendum h – class 2L refrigerants located in machinery rooms.
 - Addressed the first public review comments. The committee will review modifications and letter ballot to send out for a second public review.
 - Proposal to changed 8.11.6 for compliance with both subsections a and b. Open flames using both combustion air from the machinery room and ensuring refrigerant detectors.
 - Proposal to modify section 5.3 – Changing Refrigerant and 7.5.1.7 - Mixing of Refrigerants. The committee needs three letter ballots for approval to send to public review.
- A subcommittee was formed to review research conducted concerning connected spaces and the refrigerant concentration calculations. They are still working on a proposal for updating the standard.
- 7.2 – 7.4 Subcommittee work on RCL calculations based on connected spaces, determining the volume, etc.

D. Programs – Tom Wolgamot

Possible ideas:

- Loads and sizing of CO2 transcritical valves.
- Brian Lahey - comparison of system types for ice rinks.
- Dustin with Tom - propane systems for whole foods.
- Doug suggested a forum of small ammonia systems.
- Resurrect the low charge systems that was previously rejected. Tom to work on resubmitting.
- Greg Scrivener – Cooling and determining cooling loads in greenhouses.
- A2L ventilation requirements with industrial installation and the new Standard 15.
- R507 systems and conversions to other refrigerants.

E. Webmaster – Eric Smith

- Eric left so not much discussion.

F. Membership – Kent Perkins

- July changes - Adnan to be the Vice Chair; Bruce to be Chair.
- You can join online to be a provisional committee member.

G. ALI Coordinator – Dan Dettmers

- Dan was absent.

9. Old Business

- No old business discussed.

10. New Business

- No new business discussed.

11. Announcements

- The next meeting will be in Orlando, FL - 2:00 PM on Monday, Feb 3, 2020.

12. Adjournment