



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

404-636-8400

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 January 25, 2021

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

DATE OF MEETING January 25, 2021 LOCATION Virtual

| MEMBERS PRESENT | YEAR APPTD | MEMBERS ABSENT | YEAR APPTD | EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE |
|-----------------------|---------------|---------------------|---------------|--|
| Bruce Griffith | 2019 | Brian Blahey | 2017 | |
| Doug Scott | 2017 | Adnan Ayub | 2018 | |
| Greg Scrivener | 2020 | Jim Young | 2017 | |
| Jim Caylor | 2018 | | | |
| Tom Wolgamot | 2020 | | | |
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DISTRIBUTION: *All Members of TC10.1 plus the following:*

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| 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 Bruce Griffith.
2. Introduction of members and guests.
3. A quorum was established.
Voting Members: Doug Scott, Brian Blahey, Jim Young, Tom Wolgamot, Greg Scrivener, Adnan Ayub, Jim Caylor, Bruce Griffith
Present: Doug, Greg, Jim C., Tom, and Bruce
Absent: Brian, Adnan, and Jim Y.
4. Code of ethics was read by Bruce Griffith.
5. Meeting Minutes
Vote on Meeting Minutes for the Summer 2020 Virtual Meeting, Motion to accept minutes: (4-0-1), Tom motioned, Jim C. second.
Abstain: Chair not voting.
6. Report from section head meeting – reference breakfast meeting notes.
 - TC and TAC Roster rollover date is after the June 2021 meeting.
 - TC's that have decided to merge need to vote on revised Title & Scope. Any combining TCs need to be voting on the same TPS. Completed by TC10.1 and 10.3.
 - Proposed leadership and voting roster need to be completed.
 - Looking for nominees for Hightower award; look in ASHRAE portal under TC section. Nominations are due by September 2021.
 - Reference the 2019-2024 Strategic plan.
 - Review of the On-Demand Technical Program.
 - Basecamp intro – common place for section head, TC & TAC leadership to put documents online.
7. Liaison Reports
 - A. Section Head – Charlie Henck
 - Discussion around TC 10.1 and 10.3 merging. Jim would like a combined roster for 10.1 and 10.3 by April 2021.
 - Encouraged the committee to have interim meetings between the conferences.

B. Research – Lorenzo Cremaschi not in attendance.

C. Handbook – Scott Fisher

- Refrigeration handbook 2022 version
- Voting on revisions (must be turned in by June 2021) (reference authoring portal of ASHRAE)

8. Committee Reports:

A. Handbook – Dan Dettmers

- TC 10.1 is responsible for chapters 4, 5, 13, 45, 46, 47, 48, 49, 50
- Chapter 4 - Need to incorporate Eric's comments. Adnan will also review.
- Chapter 5 - to be reviewed by Greg and Doug.
- Action: Need to vote on all revisions prior to June 2021.

B. Research – Doug Scott

- Defrost Loads – How to determine when to initiate and terminate defrost cycles for energy considerations. Will keep this project with section 10.8, but if there is any interest please contact Doug.
- Liquid separation in vessels (old 1513) – Doug commented that it was reviewed with Lane Loyko, then sent to the whole committee, but very little input received. There are two main issues: acceptable amount of liquid in mist form that the compressor can tolerate and efficiency around liquid fraction by weight. There was some discussion around whether CFD would be an appropriate means to determine liquid separation. Additional discussion around IIAR and Bent Wienke's paper on various ways for separation including impingement, spray, etc. Comments around using research results for various applications (and refrigerants) including recirculators, accumulators and low-charge vessels. Next steps – define scope / boundary around inlet conditions, determine if there are researchers willing to bid.
- Possible research project around de-carbonization and electrification. CARB would possibly help fund the project. A guide could possibly be generated from the project. Next step: Doug to lead discussion and possible RTAR development (volunteers: Igor Vaisman, Greg Scrivener, Don Cleland, Bruce Griffith).

C. Standards – Greg Scrivener

SSPC 15 Update

- SSPC 15 is meeting every 3 weeks currently and invitations are available from ASHRAE, as they are public.
- Several other working groups are in progress (i.e. machine room ventilation changes for A2L)

- Look for second public review of Addendum E (piping) this spring.

D. Programs – Tom Wolgamot

- Refrigeration Committee formed a Program Subcommittee.
- Looking for opportunities from IIAR to present at ASHRAE conferences as seminars.
- Ideas - Effects of packaging, decommissioning by Doug Reindl; programs regarding the basics (focus on YEA), high temperature heat pump applications, quantum computing for refrigeration systems, cryogenic applications.
- Possible ideas (from previous minutes):
 - 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.
 - 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

- Action: Eric to update with latest minutes.

F. Membership – Bruce Griffith

- A new combined roster will be created for the merger of TC 10.1 and 10.3.

G. ALI Coordinator – Dan Dettmers. Need to review the Refrigeration course (Don Fenton's) material.
Action: Greg Scrivener and Doug Scott volunteered to review. Dan will provide the deadline.

9. Old Business

- No old business discussed.

10. New Business

- No new business discussed.

11. Announcements

- The next meeting will be in Phoenix or Virtual, June 2021.

12. Adjournment – approximately 3:20 pm EDT.