AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.
1791 Tullie Circle, N.E./Atlanta, GA  30329
404-636-8400

TC/TG/MTG/TRG MINUTES COVER SHEET

TC/TG/MTG/TRG No. 10.7 DATE 3/3/2014

TC/TG/MTG/TRG TITLE Commercial Food and Beverage Refrigeration Equipment
DATE OF MEETING January 20, 2014 LOCATION NY, NY

<table>
<thead>
<tr>
<th>MEMBERS PRESENT</th>
<th>YEAR APPTD</th>
<th>MEMBERS ABSENT</th>
<th>YEAR APPTD</th>
<th>EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brian Fricke</td>
<td>2012</td>
<td>Massoud Ali</td>
<td>2011</td>
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<tr>
<td>Cynthia Gage</td>
<td>2012</td>
<td>Maryline Rassi</td>
<td>2011</td>
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<td>Robert Sperl</td>
<td>2010</td>
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<tr>
<td>Dave Demma</td>
<td>2012</td>
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<tr>
<td>Massoud Neshan</td>
<td>2011</td>
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<tr>
<td>Charles Hon</td>
<td>2012</td>
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<td></td>
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<tr>
<td>Cesar Lim (VNQ)</td>
<td>2010</td>
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DISTRIBUTION

All Members of TC/TG/MTG/TRG plus the following:

TAC Section Head: Ken Cooper
TAC Chair: Walter Grondzik

All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:
ALI: Hugh McMillan
CTTC: Gerald Hartford
RAC: John Shonder
STD: Cecily Grzywacz

Manager Of Standards
Manager Of Research & Technical Services
Stephanie Reiniche
Mike Vaughn
1. Welcome & Introductions
   Chair Brian Fricke called the meeting to order at 2:20 pm. Members and guests introduced themselves. The Agenda was distributed, and a sign-in sheet was circulated. 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
   The agenda was reviewed. No new items were identified.

3. Determination of Quorum
   Quorum was established with six voting members present excluding the chair.

4. Scope / MBO’s
   For the benefit of guests, Fricke read the TC’s scope. He referred participants to the Agenda to find details of the TC’s objectives.

5. Liaisons & Announcements
   A) RAC Liaison: John Shonder reported on RAC actions affecting TC 10.7.
     - 1467 RP – The Principle Investigator needs to provide a draft technical paper to complete this project.
     - 1706 RTAR – RAC would like the TC to resubmit the RTAR or drop it.
     - 1722 RTAR – This RTAR was returned to the TC but just needs a little more explanation.

   B) REF Liaison: Cesar Lim reported on some of the Refrigeration Committee’s activities. The Ammonia Position Document was reaffirmed. Issues are still being resolved with the Sustainable Refrigeration Guide. The name was changed for the CTTC “R” in ASHRAE award to the Donald R. Siller “R” in ASHRAE award.

   C) Chair’s Breakfast: Fricke reported on items from the breakfast.
     - TAC has developed a new award to recognize TCs. The Outstanding TC award will be given to one TC per section. The award has rating criteria, and the first awards will be presented at the next Winter meeting.
     - CEC has developed a new program session called a workshop. It is described as a combination of a seminar and a forum.
     - Members of Section 10 decided to have a brain storming session on research. The first meeting will be held in Seattle on Sunday night during TC 10.1’s research subcommittee meeting. If successful this approach could spread to conference sessions with an overall goal to strengthen our section’s visibility.

6. Roster and Membership
   Fricke reported that two voting members, Robert Sperl and Cesar Lim, would be rolling off after the June meeting. In addition, Maryline Rassi would no longer be participating since she has changed jobs. Three new voting members were identified to roll on: Carl Roberts, Jon Murray, and Tim Anderson. Replacements were also needed for the secretary and research subcommittee chair positions beginning the next society year. Lauren Zelinski
volunteered to be secretary, and Shitong Zha agreed to serve as the research subcommittee chair. (Action item 1)

7. Review Draft Minutes from the 2013 Summer Meeting in Denver, CO
Fricke asked for any corrections or additions to minutes. None being noted, it was moved and seconded to approve the minutes. 6-0-0-2 CVN (1 VQA yes)

8. Subcommittee Reports:
A. Program Subcommittee (Caleb Nelson, Chair)
Nelson reported on the discussion from Sunday’s Program Subcommittee meeting. No technical or conference papers were submitted for Seattle. Several topics were identified as future conference sessions though none could be completed in time for Seattle. Future topics include: coating coils to prevent frosting (2 projects from SCE); demand defrost for walk-ins; a technical paper from RP-1467; papers or a seminar on 404a retrofits (potential presenters: Arkema, Honeywell and Dupont); CO₂ applications (potential presenters: CTA and SCE); and heat reclaim (CTA has some info on when to apply this).

Nelson also noted that there was interest in identifying some case studies on the refrigerant commissioning guide. Georgi Kazachki reported to the full TC that the REF committee is developing a session on this topic for Seattle. Speakers will be Doug Scott from Vacom and Richard Royal from Walmart (both on the development of the guide). A third speaker to present a commissioning case study was being identified. REF requested co-sponsorship from TC10.7 for this session. It was moved and seconded to co-sponsor the REF session. 6-0-0-2 CVN (1 VQA yes)

An additional program idea was generated during the full TC meeting - optimizing case design. It was noted that Navigant had done a study on this for the DOE rulemaking. This discussion overlapped with some needs identified for research RTARs.

B. Research Subcommittee (Daryl Erbs, Chair)
Erbs reported on the discussion from Sunday’s Research Subcommittee meeting.
- WS 1615 (TC7.5, with TC 10.7 co-sponsor) - Fault Detection and Diagnostic Methods for Supermarkets. The Work Statement was returned to TC7.5 from RAC and has been revised. Faramarzi is TC10.7’s representative on this project. (Action item 2)
- RTAR 1706 – Minimum Refrigerant Charge Attainment for Commercial Refrigeration Systems. Erbs has addressed the comments from RAC. He will send to Cynthia Gage and Carl Roberts for review before resubmitting to RAC. (Action items 3 and 4)
- RTAR 1722 – Optimizing Air Curtains for Refrigerated Display Cases with Glass Doors. Carl Roberts has addressed RAC’s comments, and the RTAR will be resubmitted. (Action item 5)

Several new topics were discussed for development into Research Projects. Tim Anderson is developing an RTAR for two-phase refrigerant flow exiting a display case. Todd Jekel from commercial ammonia will help. Kristina Kamensky is writing an RTAR on developing models for infiltration in walk-in coolers/freezers. Shitong Zha indicated a lack of information on heat reclaim in supermarkets. While there is background info on the loads and the operation times, heat reclaim may conflict with floating head. Some past work has been done and could be reviewed and analyzed for development of a new RTAR on design tool development. Dr. Mazyar Amin will develop an RTAR on optimization of air curtains in vertical display cases, including incorporating horizontal air streams. Tim Anderson will work with Dr. Amin on this topic. Existing data needs to be gathered on display case performance and compared to the new standards. There will also be a new report on the benefits of demand shifting for commercial ice machines.
Daryl Erbs will work with Scott Mitchell and Denis Livchak to define opportunities for future research on this subject.  (Action item 6)

C. Handbook Subcommittee (Dave Demma, Chair)
There was no handbook meeting as our Chapters were submitted after the June meeting for publication in the 2014 Refrigeration Handbook. Cynthia Gage commented that it has been many years since Chapter 16 (Food Service and General Commercial Refrigeration Equipment) has been updated. It was noted that writers contributing to the chapter do not have to be TC members, and that the chapter can be updated at any time and does not have to wait for the Handbook cycle. There was general agreement that an update is warranted. (Action item 7)

D. Standards Subcommittee (Van Baxter, Chair)
Baxter reported that the TC has been asked to review and present a recommendation to Standards on Std. 32.2. Baxter has received some minor editorial comments from ASHRAE, but comments from another reviewer indicate that there are some outdated items in the standard. Daryl Erbs is willing to chair the SPC. Steve Cousin from Coke and Scott Mitchell from SCE are willing to participate on the committee. It was moved and seconded that the TC recommend that the standard be revised with Daryl Erbs serving as chair of the committee. 6-0-0-2 CNV (1 VNQ yes) (Action item 8)

Baxter then asked the chairs of our other cognizant standards to report on their committees.
- SPC-29 (Daryl Erbs)
  Erbs reported that the SPC will meet after the TC meeting. Two voting members of the committee are/will resign and are/will be replaced. The committee hopes to resolve some final issues and get the public draft out ASAP.
- SPC-32.1 (Scott Mitchell)
  Mitchell reported that the committee met on Sunday. The committee needs one more voting member. They are defining the needs for the standard and will work through conference calls between ASHRAE meetings.
- SPC-72 (Charlie Hon)
  Hon reported that the draft standard has gone through public review which closed at the end of December. All comments have been addressed. It now resides with ASHRAE. This Standard is now referenced in federal standards, and DOE has identified 17 exceptions and changes which they need in the ASHRAE standard. There is a lot of activity in this arena from DOE, Canada, Energy Star and others. The SPC would like their topic to be a standing SPC as they want to keep it updated in a timely manner at least for the foreseeable future. Hon agreed to serve as Chair during the transition. Jon Murray and Dean Swofford volunteered to help on the committee. Ken Cooper, our Section Head, suggested that we make the recommendation with the present committee and after approval members can roll on and off. It was moved and seconded that the TC recommend that SPC 72 be revised to an SSPC with Charlie Hon as the chair. 6-0-0-2 CNV (1 VNQ yes). (Action item 9)
- SPC 210 (Kristina Kamensky)
  Kamensky reported that the committee met on Monday. The committee is submitting a revised purpose and scope to Standards. The new purpose will be a method of testing for rating walk-in coolers and freezers. One committee member is dropping off, and a voting member is being sought in the category of user or general public.

Baxter concluded by reporting that we had reaffirmed Std 18 last year and that SPC 147 had also voted to become an SSPC. Approval from Standards for this is expected in Seattle. Robert Sperl will probably be the new chair.
E. Website (Kyle Larson, Webmaster)
Larson reported that the website is up-to-date but he would like add additional information on the site. It was suggested to add links from our TC page to the SPC pages for those where we are cognizant. (Action item 10)
The TC’s website address is http://tc107.ashraetcs.org/

9. Adjournment
The meeting adjourned at 4:10 pm.

TC 10.7 ACTION ITEMS
Winter Meeting 2014

<table>
<thead>
<tr>
<th>Action #</th>
<th>Responsibility</th>
<th>Summary of Action</th>
<th>Status</th>
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<tbody>
<tr>
<td>1</td>
<td>Fricke</td>
<td>Update roster with new members, secretary, and research chair.</td>
<td>Completed</td>
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<tr>
<td>2</td>
<td>Faramarzi</td>
<td>Participate on WS 1615 as TC’s representative.</td>
<td>On-going</td>
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<tr>
<td>3</td>
<td>Gage Roberts</td>
<td>Review corrections to RTAR 1706.</td>
<td>Completed</td>
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<tr>
<td>4</td>
<td>Erbs</td>
<td>Resubmit RTAR 1706.</td>
<td></td>
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<tr>
<td>5</td>
<td>Roberts</td>
<td>Resubmit RTAR 1722.</td>
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<tr>
<td>6</td>
<td>Anderson</td>
<td>Develop new RTARs as discussed in Section 8B.</td>
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<tr>
<td></td>
<td>Kamensky</td>
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<td></td>
<td>Amin</td>
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<tr>
<td>7</td>
<td>Demma</td>
<td>Identify potential contributors to lead and develop an update of Chapter 16.</td>
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<tr>
<td>8</td>
<td>Baxter</td>
<td>Submit TC’s recommendation on Std 32.2 to the Standards Committee.</td>
<td>Completed</td>
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<tr>
<td>9</td>
<td>Baxter</td>
<td>Submit to the Standards Committee the TC’s recommendation to convert SPC 72 to an SSPC.</td>
<td>Completed</td>
</tr>
<tr>
<td>10</td>
<td>Larson</td>
<td>Add links from the TC’s website to our SPC web pages.</td>
<td></td>
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