

**ASHRAE TC 10.8
Refrigeration Load Calculation
2017 Winter Meeting Minutes**

3:00 – 5:00 P.M.
Sunday, January 29, 2017
Las Vegas, NV

ACTION ITEMS FROM THIS MEETING:

A.	Handbook	Consolidate comments received	Todd Jekel
		Complete unit conversion in load calculation example	Todd Jekel
		Provide verbiage on safety factor versus equipment de-rating	Doug Scott
		Provide verbiage on ventilation	Todd Jekel
B.	Research	Convert WS 1434 to new format and continue to advance this	Doug Scott
		Seek possible host facility	John Gallaher
		Review 1434 (copies provided) and provide comments back to Doug Scott within 2 weeks	Entire Committee
		Insulation Degradation RTAR	Volunteer Needed
		Work on RTAR for loads, capacity, and calculations	Daniel Cowan
C.	Programs	Paper abstracts on load calculations to be completed prior to March 1	Ice Cream Production - Doug Reindl Brewing – Dan Dettmers Ice rinks – John Davis Frozen pizza – Don Fenton Kiwi fruit – Richard Love Winery – Don Cleland Blast freezer – Doug Scott Piping insulation load pickup – Jim young Soybean Tempe – Daniel Cowen
D.	Website	Update with next meeting date	Ryan Hoest
E.	Membership	Kent Perkins to be made CM John Gallaher to be CM	Don Fenton

1. Call to order at 4:06PM. 3 of 5 VMs in attendance. Quorum established.
Introductions made.
2. Meeting Minutes and General Business
Minutes approved and seconded unanimously.

3. Liaison Reports

Research - H Ezzat Khalifa (rl10@ashrae.net) (Research liaison) was present. No active RTARs and WSs currently from this TC. It was discussed that 1434 fell off the list, but kept as a WS (This is co-sponsored with 10.5). Research is preparing a training session for PMS. It was stated that we must follow the templates for RTARs and WS. If the bullet points are not met, then the RTAR/WS will not be looked at. Innovative research grants and other vehicles are available to encourage research. These grants would be used for things that don't fall under the Committee's domain. They tend to be a little more risky perhaps. ASHRAE is somewhat unique in that it funds research.

Handbook - Scott Fisher (Handbook liaison) was present. The dates listed in the previous minutes appear to be accurate. He was hoping to have the chapter ready to vote on this meeting. Todd stated it is close, but he needs to do the conversions in the calculation examples. March 9 is the date ASHRAE is expecting the chapter approval. It was noted this was not a hard date, and if we can get this done at the summer meeting, then we will be in good shape. When we have the chapter approved, we are to send a copy to Scott and copy Heather Kennedy, and Mark Owen.

4. Report on Section Head Meeting

The Meeting occurred this earlier in the morning. The highpoints were:

Recipients of the Hightower and other awards were announced.

Science and Technology for the Built Environment (STBE) was discussed. This is ASHRAE's archive of original research.

Research subcommittee chair breakfast is tomorrow.

Program subcommittee chair training meeting is Tuesday at 11:15. It was noted we should not complain about programs not being accepted if we don't attend the training.

There was a fair bit of discussion on the use of RPM (Remote Participant Meetings). They have 6 sites available, with 10 available for Long Beach. These are first-come, first-serve at this point.

If we having trouble getting a quorum, this is a good avenue. Strongly recommending using RPM for subcommittee activities. It was noted that if these are used, then should list that these are happening on the TC website and refer to this site in the Meeting Agendas.

PDC (Professional Development Courses) are seeking new ALI courses, with a special interest in refrigeration.

5. Committee Reports:

A. Handbook – Todd Jekel.

Todd has received some comments from Doug and Dan. Todd will take a look at the unit conversions in the Total Facility load calculation example. Todd will consolidate the comments and send out the final proposed revisions to the committee. Todd will try to get this done by

the March 9 deadline. Doug is looking for verbiage about safety factors versus equipment de-rating and will try to get this to Todd.

B. Research – Doug Scott.

Doug provided copies of 1434 to the committee and has advanced this a bit. It needs to go into the new format. Doug is soliciting agreement from a couple of sites to act as hosts. John Gallaher will try to coordinate with a host facility. John asked if we looked at collaborating with the Global Cold Chain Association (GCCA). Doug indicated they would be a party from which co-funding would be sought. Comments are to be returned to Doug in two weeks for inclusion, and Doug will attempt to respond to these within the subsequent 2 weeks. After collation, Doug will have it reviewed by the Research Liaison and then presented to the committee for approval.

Doug thought there was still a lot of value for research on the degradation of insulation with the development of a field test method for use in facilities. One possible project is to develop a test method and validate through field surveys. This research relates to load calculations in that an appropriate safety factor could be applied to the insulation rating. Doug asked for volunteers to advance this RTAR. This is specifically for walls and roofs. Heat flux meters are made for this type of analysis, but it is unknown how well they work for low-temp applications. There was a discussion about writing a journal paper to test proof of concept. Doug is continuing to look for volunteers.

10.1 is working on an RTAR about defrost loads on the systems and spaces. 10.8 will evaluate co-sponsoring this after having a chance to review.

C. Programs – Dan Dettmers

The program this AM seemed to go well with generally positive feedback. There is another program Wednesday at 11:00AM.

The next Winter Meeting is in Chicago. Dan would like to have conference papers put together on loads for this meeting. These examples could ultimately be put into the handbook. The abstracts need to be written by March 1. The following load calculation papers are to be worked on:

- Ice Cream Production – Doug Reindl
- Brewing – Dan Dettmers
- Ice rinks – John Davis
- Frozen pizza – Don Fenton
- Kiwi fruit – Richard Love
- Winery – Don Cleland
- Blast freezer – Doug Scott
- Piping insulation load pickup – Jim young

Soybean Tempe – Daniel Cowen

Dan will also do another 10 minute lighting round.

E. Webmaster – Ryan Hoest.

Ryan is still agreeing to be the webmaster. Website needs to be updated with next meeting dates.

F. Membership – Don Fenton

For 2017/2018 - Doug to serve as Chair, Tom as Vice Chair (will not be a VM after June), Tobey as Secretary. Dr. Love volunteered to be Research Sub-Committee Chair. Dan to continue as Program Sub-Committee Chair. Kent needs to be made a Corresponding member first, then can be a VM after one year, DJ Mody can also be a VM, Todd will be a VM. John Gallaher will also be made a CM.

G. ALI Coordinator – Dan Dettmers

No activity

5. Old Business

- A. Load Chapter review – largely complete, underway.
- B. Chapter 24 load calc conversion – underway by Todd.
- C. 1434 WS – is being progressed. Comments to be given back to Doug.
- D. RTAR hourly load calculation/energy model/field calibration - this was deemed to be too broad to tackle at this point and suggested that we start with a field study of system capacity. See related item under New Business.
- E. RTAR on Field survey of insulation – volunteer being sought to advance this.

6. New Business

- A. There was discussion on doing a field study to review equipment capacity versus actual loads. It is generally claimed that most systems are 40% oversized, and shining the light on this would help provide insight to right-sizing equipment. This would focus on load capacity/demand in warehouses and not process facilities. The findings would then be compared to current load calculation methodology to see where they fall. Daniel Cowan has volunteered to do progress this.
- B. There was discussion on possibly include a section in the Chapter on ventilation due to personnel load. At what point does this become necessary instead of being exempt? At this point it was decided to refer to the Fundamentals in this Chapter if this is required by including a brief statement. Todd to develop this.

7. Announcements

No announcements were made

8. Adjournment. Motion to adjourn made at 4:57PM.

TC 10.8 REFRIGERATION LOAD CALCULATIONS

<u>NAME</u>	<u>COMPANY</u>	<u>EMAIL</u>	<u>VM/CM/—</u>
DOUG SCOTT	VACOM	DSOTTE@VACOMTECH.COM	VM
Dhiren Mody	ERS Inc	ERSINCAZ@AOL.COM	VM Refrigeration
Scott Fisher	State Farm	SFISHBMC@GMAIL.COM	liaison
Kent Perkins	Colmac Coil	kent.perkins@colmaccoil.com	Guest VM CM
TOM WOLGAMOT	DC ENGINEERING	TWOLGAMOT@DCENGINEERING.NET	CM
JOHN GALLAGHER	HILLPHOENIX	john.gallagher@hillphoenix.com	GUEST
TODD JEKEL	IRC	todd.jekel@wisc.edu	CM
Daniel Dettmers	IRC	daniel.dettmers@wisc.edu	CM
Richard Love	Masseng Uni	r.j.love@masseng.ac.nz	VM/CM
DANIEL COWAN	EMCORE	COWAN@NEMSI.COM	CM
S.A. Sherif	Univ. of Florida	sasherif@ufl.edu	CM
Don Fenton	Kansas State U.	fenton@ksu.edu	CM
JAY DOSHI	Vacom Technologies	jdoshi@vacomtech.com	Guest
APICHIT L. PONGPANA	I.T.C. Co. Ltd	apichit.pana@itc-group.co.th	VM