

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING  
ENGINEERS, INC.  
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. TC 10.6 DATE February 16, 2016  
 TC/TG/MTG/TRG TITLE Transport Refrigeration  
 DATE OF MEETING January 25, 2016 LOCATION Orlando, FL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Chris Repice	2015	Mikelann Scerbo	2015	Robert Chopko Hugh O'Reilly Curt Lawson Greg Smith Ming Zhang Kezhen Shen Bob Jones Jeremy Tait Anne McAndrew Ciara Poolman
Casey Briscoe	2015	Richie Mohan	2014	
Bill Murphy	2015	Kent Anderson (Non-Quorum)	2014	
James Eckelkamp	2012			
Qiao Lu	2012			
Igor Vaisman	2015			

**DISTRIBUTION**

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

TAC Section Head:	
TAC Chair:	
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:	
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn

*Note: These draft minutes have not been approved and are not the official approved record until voted on by the committee.*

## Meeting Minutes

Monday, January 25, 2016 Meeting of the  
**ASHRAE Technical Committee (TC) 10.6, Transport Refrigeration**  
Orange County Convention Center, Orlando, Florida  
Meeting Room: Room S331B, South Concourse, Level 3  
Time: 4:45 – 7:00

### **I. CALL TO ORDER** (Chair Robert Chopko)

Committee Chair Robert Chopko called the meeting to order at 4:47 pm.

#### A. Introduction of members and guests

Members and guests introduced themselves. Six of the nine voting members were present, so quorum was met. Total attendance, including all voting members, corresponding members, and guests, was 16 people.

#### B. Additions/revisions to agenda

No additions or revisions were made to the agenda.

### **II. MEETING MINUTES APPROVAL** (Robert Chopko)

The minutes of the meetings held on January 26, 2015 (Chicago, Annual Meeting) and June 29, 2015 (Atlanta) were reviewed. No revisions or additions were suggested. With quorum present, a vote for approval of Chicago and Atlanta minutes was held.

**MOTION** by Jim Eckelkamp to accept Chicago meeting minutes, seconded by Chris Repice.

**MOTION** by Bill Murphy to accept Atlanta meeting minutes, seconded by Jim Eckelkamp.

### **III. RECOGNITION OF LIAISONS AND ANNOUNCEMENTS** (Robert Chopko)

The following liaisons were in attendance at the meeting:

Bill Murphy – Handbook Liaison for TAC Section 10  
Kezhen Shen – AHRI, substitute for Mikelann Scerbo

### **IV. REVIEW OF TC10 SECTION MEETING** (Robert Chopko)

Robert Chopko attended the TC10 Section Chair Breakfast Meeting and reported on highlights:

- Conferences and Expositions Committee (CEC) has a standing request for future society meeting program track suggestions. Suggestions can be submitted to Tony Giometti (giometti@ashrae.org).
- Overall publication schedule for 2016 ASHRAE Annual Conference, St. Louis, MO outlined below. For specific details and questions regarding these dates, please contact the appropriate chair.

February 8, 2016 Seminar, Forum and Workshop Proposals Due

February 15, 2016 Revised Conference Papers/Final Technical Papers Due

February 26, 2016 Conference and Technical Paper Final Accept/Reject Notifications

March 23, 2016 Seminar, Forum and Workshop Accept/Reject Notifications

May 6, 2016 Upload of PPTs Begins

June 6, 2016 All PPTs Due Online

June 22, 2016 Final Day for Commercialism Revision Upload

The full minutes of the Section meeting are attached in Appendix A.

## V. REVIEW COMMITTEE MEMBERSHIP, ROLES, AND CONTACT INFORMATION

The proposed roster for 2016-2017 (Appendix B) was reviewed by the committee and will be submitted to Tech Council. Note that two changes have been made for the 2016-2017 roster:

- Mr. Bob Jones will replace Mr. James Ecklekamp as a voting member
- Looking for volunteer to replace Dr. Qiao Lu as a voting member

The total roster of voting members will include seven voting members upon replacement of Dr. Liu. Mr. Kent Anderson will continue to serve as a member non-quorum.

Mr. Chopko has asked the committee to consider filling the secretary position for the 2017-2018 term. Those interested should contact him.

## VI. STANDARDS ACTIVITIES UPDATES (Robert Chopko for Kevin Glover)

Kevin Glover provided the following update on the revision of ASHRAE Standard 26-2010 – Mechanical Refrigeration and Air-Conditioning Installations Aboard Ships:

- Committee submitted work plan (Appendix C) that was approved by SPLS in August 2015
- Attendance at two committee meetings held to date have generally been two members and the chair
- Intent of Orlando meeting is to assign various sections of standard to different committee members to begin drafting revision
- Planning interim meeting to review progress in approximately three months
- Completion of the next revision is targeted by the end of 2016

## **VII. RESEARCH ACTIVITIES UPDATE (Chris Repice)**

Chris Repice provided a report on research activities:

- Tech Council RAC would like more applied research
- AHRI has begun Flammable Refrigerants Research Initiative to understand knowledge gaps and develop a roadmap of priorities and timeline to complete research. Initiative is chaired by Tom Watson.
- 9 RTARs were considered with 5 accepted and 4 rejected
- RTAR submittal dates are as follows: May 15, August 15 and December 15, 2016
- Complete notes from the Research Subcommittee Chairs' Breakfast are included in Appendix C.

From Atlanta meeting, a consensus was reached that RTAR 1706, "Minimum Refrigerant Charge Attainment for Commercial Refrigeration Systems," would be of value to TC 10.6 with the addition of refrigerants typically used in transport refrigeration applications. Upon refrigerant list update, Chris Repice will provide the updated RTAR to TC 10.6 voting members via email. Mr. Repice will summarize the TC 10.6 voting member feedback and provide to TC 10.7. After final revisions have been completed on the RTAR a final vote on co-authorship of RTAR 1706 will be completed via email by the time of the St. Louis meeting.

**ACTION:** Chris Repice will update TC 10.7 on the appropriate refrigerant list to include transport applications in RTAR 1706 and distribute RTAR revision for TC 10.6 voting member review.

From Atlanta meeting, the committee reviewed a draft RTAR titled "Fuel Efficiency Rating for Transport Refrigeration Units." Based on previous consensus of committee members, it was agreed further refinements to the draft RTAR would be appropriate to ensure common agreement on the end goals. A working meeting has been proposed to reach a consensus on changes to the RTAR.

**ACTION:** Robert Chopko to set up a conference call for Carrier Transicold and Thermo King to reach a consensus. Draft will be provided to TC 10.6 for final discussions on the draft RTAR on "Fuel Efficiency Rating for Transport Refrigeration Units."

## **VIII. PROGRAM UPDATE (Robert Chopko for Robert Srichai)**

There is a call for anyone interested in being a reviewer for papers for future conferences. Dr. Qiao Lu, Dr. Igor Vaisman, and Dr. Casey Briscoe have volunteered to be reviewers. Anyone else interested in being a conference paper reviewer should contact Robert Chopko.

## **IX. HANDBOOK (Bill Murphy acting for Jeff Berge)**

Bill Murphy will replace Jeff Berge as chair of the Handbook Subcommittee.

The deadline for drafts of proposed updates to chapters 25, 26 and 27 is around January, 2017. Bill Murphy provided the three chapters TC 10.6 is responsible for in Word file format via email. General feedback based on an outside review concluded no major overhaul will be required at this point. Don Fenton provided comments from an individual in marine refrigeration on chapter 26; it was suggested chapter 26 is in decent shape and will require minor changes.

Additional volunteers were sought for contribution to the handbook updates. Chris Repice has volunteered to assist with chapter 25. Discussion arose on soliciting contributions from additional parties (Boeing, etc.) for chapter 27. From Atlanta meeting, Robert Srichai and Dr. Xiaotang Zhou offered help with chapter 25. Kevin Glover offered help with chapter 26. Dr. Qiao Lu and Dr. Igor Vaisman offered to help with chapter 27.

**ACTION:** Dr. Qiao Lu will contact additional third parties for feedback on chapter 27.

## **X. WEBSITE (Robert Chopko acting for Jeff Berge)**

The website is up-to-date with recent meeting minutes and meeting information.

## **XI. OTHER BUSINESS**

Robert Chopko brought up discussion on the presence of refrigeration topics within ASHRAE workshops, seminars and presentations during the conferences. A refrigeration track is on the schedule for the St. Louis conference; however, concern within TC 10.6 has arisen over the focus on refrigerants rather than refrigeration systems. Additionally, ALI is looking for ideas on short courses for St. Louis. Abstract must be submitted by February 8, 2016 for consideration. Solicitation for research proposals or presentation opportunities should be directed to Robert Chopko.

**ACTION:** Dr. Casey Briscoe to contact TC 10.6 members for possible short course topics.

Bill Murphy recommended a seminar proposal submission for transport refrigeration. Discussion arose on a transport refrigeration seminar. A group brainstorm resulted in the following possible topics: basics of refrigeration, refrigeration in aircraft and regulatory impact on refrigeration. Robert Chopko volunteered to write an abstract and proposal for the February 8 deadline. It was decided a follow up call will be required to decide on a topic for submission.

**ACTION:** Robert Chopko to organize conference call to discuss refrigeration seminar.

Topic of new secretary was touched on again with importance placed on identifying an individual by the St. Louis meeting. Bill Murphy volunteered to fill the secretary position unless another individual shows interest.

Bill Murphy introduced the 2016 Purdue Conferences with three conferences covering compressor engineering, refrigeration and air conditioning and high performance buildings. Short courses are also available prior to conference commencement. Additional information can be found in Appendix D.

## XII. ADJOURNMENT--UPDATE

Next Meeting: Monday, June 27, at the 2016 ASHRAE Annual Conference (June 25–29, 2016), St. Louis, MO.

**MOTION** to adjourn by Bill Murphy, seconded by Jim Ecklekamp. The meeting was adjourned at 5:43 pm.

## APPENDIX A

Announcements from the TC 10 Section Chair Breakfast meeting are embedded below:



TAC SH Brkfst  
Handout W16 r2.pdf

## APPENDIX B

### CURRENT 2015/2016 Roster

Position	2015-2016
Chair	Mr. Robert Chopko
Vice Chair	Dr. Casey Briscoe
Secretary	Ms. Ciara Poolman
Research Subcommittee Chair	Mr. Chris Repice
Standards Subcommittee Chair	Dr. Xiaotang Zhou
Program Subcommittee Chair	Mr. Robert Srichai
Handbook Subcommittee Chair	Mr. Jeffrey B Berge
Webmaster	Mr. Jeffrey B Berge

### CURRENT 2015/2016 Voting Members

Current Voting Member	Term
Mr. James T Eckelkamp	7/01/2012 to 06/30/2016
Dr. Qiao Lu	7/01/2012 to 06/30/2016

Ms. Mikelann Scerbo	7/01/2015 to 6/30/2019
Mr. Chris Repice	7/01/2015 to 6/30/2019
Dr. Casey Briscoe	7/01/2015 to 6/30/2019
Dr. William Murphy	7/01/2015 to 6/30/2019
Dr. Igor Vaisman	7/01/2015 to 6/30/2019
<b>Non Quorum Voting Member</b>	
Mr. Kent Anderson	7/01/2014 to 6/30/2018

**PROPOSED 2016/2017 Roster (TBD)**

<b>Position</b>	<b>2016-2017</b>
<b>Chair</b>	Dr. Casey Briscoe
<b>Vice Chair</b>	Ms. Ciara Poolman
<b>Secretary</b>	TBD
<b>Research Subcommittee Chair</b>	Mr. Chris Repice
<b>Standards Subcommittee Chair</b>	Dr. Xiaotang Zhou
<b>Program Subcommittee Chair</b>	Mr. Robert Srichai
<b>Handbook Subcommittee Chair</b>	Mr. Jeffrey B Berge
<b>Webmaster</b>	Mr. Jeffrey B Berge

**PROPOSED 2016/2017 Voting Members (TBD)**

<b>Current Voting Member</b>	<b>Term</b>
Bob Jones	7/01/2015 to 06/30/2019
<del>Dr. Qiao Lu (REPLACE)</del>	<del>7/01/2012 to 06/30/2016</del>
Ms. Mikelann Scerbo	7/01/2015 to 6/30/2019
Mr. Chris Repice	7/01/2015 to 6/30/2019
Dr. Casey Briscoe	7/01/2015 to 6/30/2019
Dr. William Murphy	7/01/2015 to 6/30/2019
Dr. Igor Vaisman	7/01/2015 to 6/30/2019
<b>Non Quorum Voting Member</b>	

## APPENDIX C

Minutes from the Research Subcommittee Chairs' Breakfast are embedded below.



TC 10-6 RSC Minutes  
Orlando Jan-2016.do

## APPENDIX D



Purdue Conferences  
Reader