

TC/TG/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/TRG No. 8.4 Date February 6, 2007  
 TC/TG/TRG TITLE: Air-to-Refrigerant Heat Transfer Equipment  
 DATE OF MEETING: January 30, 2007 LOCATION: Dallas, TX

Members Present	Year APPTD	MEMBERS ABSENT	Year APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
<b>Mahesh Valiya-Naduvath (Vice Chair)</b>	06	Dan Kramer	04	<b>Mustafa Yanik</b> <b>Brian Kastl</b>
<b>Steve Hancock</b>	06	Steve Memory (Chair)	04	
<b>(Secretary/Membership)</b>		Jim Parsons	03	
<b>Man-Hoe Kim (Int'l Mbr)</b>	04	Edward Vineyard	05	
<b>Michel LeCompte</b>	05	(Program)		
<b>Harry Li</b>	06	Ming Zhang	03	
<b>Jose Perez-Galindo (International Mbr)</b>	05	Charles Arnold	CM	
<b>Gordon Struder</b>	05	Young Bae	CM	
<b>Samuel Yana-Motta (ALI)</b>	05	Antonio Baldantoni	CM	
<b>Gerald Wyatt</b>	06	Andrew Beaver	CM	
		Charles Bemisderfer	CM	
		Ahmed Bensafi	CM	
<b>Anthony Jacobi</b>	CM	Louay Chamra	CM	
<b>Mark Johnson</b>	CM	John Chato	CM	
<b>Robert Jones</b>	CM	Mike Connaghan	CM	
<b>Ram Narayanamurthy (Handbook)</b>	CM	Katherine Flamm	CM	
<b>Eric Ratts</b>	CM	Bill Fox	CM	
<b>S A Sherif</b>	CM	Kwok Fung	CM	
		Dominique Hantz	CM	
		Mark Hoehne	CM	
		Dave Honeycutt	CM	
		Shaobo Jia	CM	
		Stan Kistler	CM	
		Paul Krause	CM	
		Satheesh Kulankara	CM	
		Pedro Mago	CM	
		Alfi Malek	CM	
		Kevin Mercer	CM	
		Christoph Meurer	CM	
		Mike Ohadi	CM	
		Nicole Okamoto	CM	
		Gary Price (Standards)	CM	
		Keith Rice	CM	
		Ray Rite (Webmaster)	CM	
		William Stewart	CM	
		Liangyou Tang	CM	
		Yong Xin Tao	CM	
		William Tinsley	CM	
		Robert Utter	CM	
		Michael Wilson	CM	
		David Zietlow (Research)	CM	
		Lizheng Zhang	CM	

DISTRIBUTION  
ALL MEMBERS OF TC/TG/TRG

TAC Chairman: \_\_\_\_\_ Patricia Thomas Graef \_\_\_\_\_  
TAC Section Head: \_\_\_\_\_ Vinod Gupta \_\_\_\_\_  
Professional Development: \_\_\_\_\_ Gordon Holness \_\_\_\_\_

LIAISONS:

RAC Research: \_\_\_\_\_ Ron Bailey \_\_\_\_\_  
Program: \_\_\_\_\_ Lynn Werman \_\_\_\_\_  
Standards: \_\_\_\_\_ Stephen Skalko \_\_\_\_\_  
Handbook: \_\_\_\_\_ William Walter \_\_\_\_\_  
Special Pubs: \_\_\_\_\_ Harvey Sachs \_\_\_\_\_  
Chapter Technology Transfer: \_\_\_\_\_ Michael Middleton \_\_\_\_\_  
STANDARDS STAFF LIAISON: \_\_\_\_\_ Claire Ramspeck \_\_\_\_\_  
TECH SERVICES/RESEARCH STAFF LIAISON: \_\_\_\_\_ Mike Vaughn \_\_\_\_\_

MINUTES  
ASHRAE TECHNICAL COMMITTEE 8.4  
AIR-TO-REFRIGERANT HEAT TRANSFER EQUIPMENT  
DALLAS, TEXAS  
TUESDAY, JANUARY 30, 2007

**I CALL TO ORDER**

The Chair, Mahesh Valiya-Naduvath, called the meeting to order at 3:30 p.m. Voting members were counted and the presence of a quorum was determined with 9 of 13 voting members present. Both international members were present. The Chair called on those present to introduce themselves and an attendance sheet was circulated.

**II MINUTES OF PREVIOUS MEETING**

Minutes of the last meeting, June 27, 2006, were unanimously approved.

**III LIAISON REPORTS FROM OTHER COMMITTEES**

Handbook: Refrigeration:William McCartney, Systems:Dave Merideth. Liaisons stopped by to introduce themselves and remind us of our upcoming handbook responsibilities.

**IV CHAIR'S REPORT AND ANNOUNCEMENTS – Mahesh Valiya-Naduvath**

- We have a new Section Head. Vinod Gupta
- Any personal updates, including e-mail address must be made via the ASHRAE website. Members are encouraged to check and, if necessary, update their information.
- There is a proposed change for program presenters. Transaction paper authors will be the only ones to get a full registration waived. Seminar presenters get a 1 day pass and session Chairs will get nothing. The Committee's sentiment is in moderate opposition to this policy. If the reason for this change is to generate more money, then the TC would prefer to see advance registration fees raised instead or a return to fewer, longer seminars.
- 2/9/07 is the deadline for Longbeach seminars. The theme for Longbeach is natural ventilation. 8/3/07 is the deadline for New York seminars. The theme for NY is safe and healthy buildings. Transactions deadline for NY 4/6/07.
- Section Head talked about management by objectives. Our objectives are an updated roster, website, and activity sheet. TCs are being tracked on their activity to see if the TCs are active enough.
- Nominations for the Hightower Award are once again solicited.
- The ASHRAE President's goals are sustainability and net-0 buildings.
- 2 TRG's have been formed. TRG4 on Sustainability Guidance Metrics and TRG7 Tools for Sustainable building operations, maintenance, and life cycle cost. Anyone wanting to work on these is welcome.

**V SUBCOMMITTEE REPORTS**

**A. PROGRAM SUBCOMMITTEE – MAHESH FOR ED VINEYARD**

We had no program at this meeting. Ed would like a seminar or forum for Longbeach and a Symposium for NY. We propose a 90 minute seminar on Advances in Refrigerant to Air Heat Transfer for Longbeach. Included would be results from 1260-RP, Man-Hoe Kim on outdoor heat exchanger design, and Mark Johnson on microchannel potential. Another idea for a Longbeach seminar, possibly cosponsored with TC8.11, would be Energy Efficiency Issues in Hot Dry Climates. Ram Narayanamurthy will be 8.4 liaison on this. February 9 is the deadline for loading title and presenters for Longbeach seminars. For NY this deadline is 8/3/07. There is a seminar proposal for NY on condensate retention. Jacobi and Man-Hoe Kim may be presenters.

**B. RESEARCH SUBCOMMITTEE –MAHESH FOR DAVID ZEITLOW**

**Existing Research Projects:**

1260-RP “Refrigerant Distribution in Evaporator Manifolds”

Vote on acceptance of final report for 1260-RP. Unanimous approval. Mahesh will send an e-mail to Mike Vaughn notifying him of this approval.

**Research Topic Acceptance Requests (RTAR’s)**

RTAR written on influence of oil circulation ratio on heat exchanger performance. Committee has concerns on the scope of the RTAR specifically on the hydraulic diameter of tubes under consideration. Yana-Motta will send his comments to Yun-Ho Hwang, the RTAR’s author. The goal is to update and submit this RTAR by 5/18/07 deadline.

2 others RTAR’s are being written:

Condensate Retention by Heidenreich. Mike is re-writing to narrow the scope to specific tube geometries and to exclude surface chemistry as a variable. He will complete the rewrite by the end of February and submit

Heat Transfer and Friction Factor for Low Reynolds Number. Mark Johnson will take responsibility for this RTAR originally authored by Kevin Mercer. Mark will make minor changes and submit the RTAR by the February deadline.

The list of future possible RTAR topics, in order of the Research Subcommittee’s priority is:

- 1 Design of cooling coils for sensible-only applications. (Data centers, etc.)
- 2 Design of a super-compact HX using biological principles.
- 3 Overfed Ammonia
- 4 Tube-tube conduction
- 5 Effect of geometry on HX inlet
- 6 Pulsating refrigerant
- 7 Optimization of stack-to-sink Heat Exchangers

The committee unanimously approves the future RTAR priorities as listed.

**C. STANDARDS SUBCOMMITTEE – MICHEL LECOMPTE**

Michel is leaving TC8.4 due to changes in his job responsibilities. We now need a Chair of Standard 33. This standard is in pretty good shape with only minor revisions needed. Ram volunteers to Chair this.

Standard 25 is also due. This one will not be easy. Struder volunteers to Chair the update of this standard. Next revision is 2009.

Standard 20 was approved in Quebec and needs no work at this time.

**D. MEMBERSHIP SUBCOMMITTEE – STEVE HANCOCK**

Roster changes:

Mahesh Valiya-Naduvath will replace Steve Memory as Chair and Hancock will replace Mahesh as Vice-Chair. Mark Johnson will replace Hancock as Secretary and Mustafa Yanik will replace Hancock membership Chair.

Rolling off Voting Members: Parsons, Zhang, Memory  
New Voting Members: Mark Johnson (if possible), Ram Narayanamurthy

Rolling off Corresponding Members: Mercer, Bemisderfer, Malek

New Corresponding Members: Heidenreich, Chitti, Lakdalawa, Yanik, and Yun Ho Hwang

**E. WEB PAGE – RAY RITE**

No Report

**F. HANDBOOK SUBCOMMITTEE – RAM NARAYANAMURTHY**

We have responsibility for four chapters: Refrigeration Chapter 42, and Equipment Chapters 21, 23, and 35.

The Refrigeration manual was just published, so Chapter 42 needs no work now.

Ram will distribute electronic copies of Equipment Chapters 21, 23, and 35 to the committee for comments. In addition, he will specify those member, in particular from whom he would specifically like input. These chapters need to be ready by March so the committee can vote in June. Ram will also talk to Jim Bogard from TC8.5 for their input as well.

**VI OLD BUSINESS**

There was none.

**VII NEW BUSINESS**

None

**VIII ADJOURNMENT**

A motion to adjourn was made, seconded and approved. The meeting ended at approximately 6:07PM.

**Respectfully Submitted by: Steve Hancock**