



**AMERICAN SOCIETY OF HEATING,  
REFRIGERATING AND AIR-  
CONDITIONING ENGINEERS, INC.**

1791 Tullie Circle, N.E./Atlanta, GA 30329  
**404-636-8400**

**TC/TG/TRG MINUTES COVER SHEET**

TC/TG/TRG TITLE: TC 8.7 Variable Refrigerant Flow

DATE OF MEETING: Monday, January 23, 2012 4:15 PM to 6:15 PM

LOCATION: **Palmer House** (6<sup>th</sup> Floor), Grant Park Lounge, Chicago, IL

<b>MEMBERS PRESENT</b>	<b>YEAR APPTD</b>	<b>EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE</b> (Corresponding Members)	<b>EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE</b> (Guests)
Bob Jones	2010	Andrew Moore	Jon Lemmond
Paul Doppel	2010	David Markusz	Manfred Gerber
Brian Bogdan	2011	Bob Skorupsky	Justin Kern
Ron Domitrovic	2010	Dermott McMorro	Mihaela Spulber
David Heckler	2010	Dominic Kolandayan	Osami Kataoka
Paul Solberg	2011	John Cummings	Jerine Ahmed
Arturo Thur de Koos	2009	Kirk Stifle	Patrick Dawson
Chris Bellshaw	2007	John Vucci	Ken Urbanek
		Jun Furuta	Mike Stem
		Sami Zendah	Ana Ruiz
		Jocelyn Leger	Daniel Kasperski
		Pam Androff	Berekel Nigusse
		Harshal Upadadhye	
<b>MEMBERS ABSENT</b>	<b>YEAR APPTD</b>	Ramiz Afify	
Oswaldo de S. Bueno	2009	Yanda Zhang	
Ishtiaq A Chisti	2011		
Dunstan Macauley	2010		

## DISTRIBUTION

<i>All Members of TC/TG/TRG plus the following:</i>	
TAC Section Head: Steve Duda	<a href="mailto:SH8@ashrae.net">SH8@ashrae.net</a>
TAC Chair: Craig Way	<a href="mailto:TACCHAIR@ashrae.net">TACCHAIR@ashrae.net</a>
ASHRAE Manager of Technical Services:	<a href="mailto:MORTS@ashrae.net">MORTS@ashrae.net</a>
All Committee Liaisons as shown on TC/TG/TRG Rosters:	Program: <a href="mailto:PL8@ashrae.net">PL8@ashrae.net</a> Special Publications: <a href="mailto:PUBCHAIR@ashrae.net">PUBCHAIR@ashrae.net</a> Handbook: <a href="mailto:HBS8@ashrae.net">HBS8@ashrae.net</a> CTTC: <a href="mailto:CTTC8@ashrae.net">CTTC8@ashrae.net</a> RAC Research: <a href="mailto:RL8@ashrae.net">RL8@ashrae.net</a> PDC: <a href="mailto:PDCCHAIR@ashrae.net">PDCCHAIR@ashrae.net</a>
Additional Distribution	
ASHRAE Manager Of Standards	<a href="mailto:MOS@ashrae.net">MOS@ashrae.net</a>

### 1. Call to Order

Paul Doppel called meeting to order, January 23, 2012, **Grant Park** (6<sup>th</sup> Floor) Lounge, Palmer House Hilton

### 2. Welcome/Introductions

- a. **Roster:** We are set up to have a specific number of voting members, eleven (11) and unlimited number of corresponding members.
  - 8 of 11 voting members present—we have a quorum.
  - Present:
    - Ron Domitrovic
    - Paul Doppel
    - Dave Heckler
    - Robert Jones
    - Paul Solberg
    - Arturo Thur de Koos
    - Brian Bogdan
    - Chris Bellshaw
  - Absent:
    - Oswaldo de S. Bueno (International)
    - Dustan Macauley
    - Ishtiaq A Chisti
- b. Announcement made: To become a corresponding member—put your ASHRAE number on the attendance list being passed around & put CC next to your name.

### 3. Minutes Approval

- a. Minutes from Summer 2011: copies were passed out
- b. No discussion
- c. Motion to accept, and 2<sup>nd</sup>
- d. Vote 7-0-0 CNV

### 4. Agenda Review/Updates: Any adjustment to the agenda?

- a. Passed 7-0-0 CNV

### 5. Chair's Comments (Doppel)

- a. Paul attended the chair breakfast
- b. Technical Council Steering Committee, task groups:
- c. Chair breakfast (Paul)
- d. ASHRAE brand NEW LOGO - document is available on-line to explain
- e. Hightower award: from TC 9.9 Donald Beaty
- f. New rule for Hightower: TC chairs cannot be nominated for their TC.
- g. Please support YEA (Young Engineers of ASHRAE)
- h. Future Meetings:

#### Dallas Meeting - January 26-30, 2013

- Conference site live: January 22, 2012
- Conference Paper abstract/Conf. Paper session proposals due March 19, 2012
- Conference Papers submitted for review are due early July 2012
- Dallas seminar and forum session proposals are due early August 2012
- Conference Website: <http://www.ashrae.org/dallas/>
  - Track 1 HVAC&R Systems & Equipment
  - Track 2 HVAC&R Fundamentals and Applications
  - Track 3 Standards, Guidelines, and Codes
  - Track 4 Energy Conservation
  - Track 5 Refrigeration
  - Track 6 Large Building Design
  - Track 7 Facility Management; Operations, Tech. and Energy Improvements
  - Track 8 – Special Interest Track

### 6. Subcommittee Reports

#### 6.1 Handbook Chapter

- a. Doppel reported on the status of Handbook Chapter.
- b. Chapter delays due to staff issues within ASHRAE
- c. The Chapter is generally accepted...Paul is monitoring.

#### 6.2 Membership

- a. Paul Solberg reported on roster updates:
  - i. Paul Doppel will roll off as chair after San Antonio meeting.
  - ii. Roll on as new voting members
    1. Jun Furuta
    2. Dermot McMorrow

- 3. David Markuz
      - iii. Looking for one more non-quorum member...
    - b. Brian Bogden has not shown up on the ASHRAE roster yet—Paul S. & Paul D. will address with ASHRAE.
- 6.3 Program Afifi
  - a. Perhaps do another session on fundamentals of Water Source to follow
- 6.4 Research Macauley
  - a. Topic came up in SSP 15 discussion that research is needed on refrigerant dispersion.
  - b. Need an RTAR...
  - c. Jon (of AHRI) will head up the RTAR effort on refrigerant dispersion.
- 6.5 Standards – Chris Bellshaw – defer to new business.
- 6.6 ASHRAE Learning Institute (ALI) - Thur De Koos – no update
- 6.7 Webmaster – update from Dominic Kolandayan
  - a. Currently up-to-date
  - b. Keep Dominic up to date on any publications that are made related to VRF. They can be posted on the website.
  - c. Will check on AHRI meeting on VRF standards (from this meeting) for inclusion on the website.
  - d. Suggestions for the website additions:
    - i. Checklist—Mihaela Spulber & Jocelyn Leger will take the lead
    - ii. FAQ—headed by David Markuz

## **7.0 Liaison Reports:**

- 7.1 ASHRAE 90.1: (Andrew Moore)
  - a. Working on 2013 revision of standard. No info yet on changes to equipment performance...
  - b. Proposed to be adopted: 10CFR 431 (DOE) all the 90.1 levels were adopted, with the exception of the 0.2 heat recovery bump for water source units between 17,000 & 135,000 Btu/hr. Open for comments through April.
- 7.2 ASHRAE 15: (Paul Doppel)
  - a. 7.3 needs re-writing—Paul Doppel will take the lead. SSP 15 committee members agree that 7.3 needs some work, but requires a change proposal with backup logic, data, etc. Dominic K. & Mihaela S. & Dermot M. offered to help.
  - b. TC 8.7 proposed changes were rejected at the SSPC meeting in Chicago—need data.
  - c. This could be a research tie in...
  - d. There is already some work in this area—related to flammability by UL.

## **8. Old Business – None**

## **9. Committee Status - TC-8.7**

## 10. New Business

- a. Steve Duda—section 8 head addressed the meeting. Complemented TC on its operation. Steve's email: [sh8@ashrae.net](mailto:sh8@ashrae.net)
- b. Research Liaison for Section 8 also stopped by...Dave Yashar
- c. Status of AHRI certification program (Paul Doppel & Jon Lemmond (AHRI))
  - i. Currently 5 members, expecting at least one more this year.
  - ii. [www.ahrinet.org](http://www.ahrinet.org) → click certification programs
- d. ASHRAE Standard 147—reduce refrigerant leaks...
  - i. Some relation (effect on) to VRF & ductless systems—proposed: eliminate single flare connections. Paul Solberg proposed some subtly different wording that would provide an exception for DHP & VRF type systems.
  - ii. Requirement for filter dryers were also an issue...
  - iii. 147 will go out for another public review.
- e. Dominic: dealing with 62.1 & 62.2 standards...doesn't address multi-split & non-ducted units. Filtration requirements are built around traditional ducted systems.
  - i. Dominic was volunteered to be the liaison
  - ii. Dermott proposed a working group with 62.1
- f. Standard 250—Ron will be Liaison going forward.

## 11. Adjournment

1. Next meeting: June 23-27, 2012 in San Antonio TX
2. Motion to adjourn—2<sup>nd</sup>—passed 6-0-0-CNV.
3. Adjourned.