

**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

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO 5.5 DATE January 21, 2014

TC/TG/TRG TITLE A i r t o A i r E n e r g y R e c o v e r y

DATE OF MEETING January 21, 2014 LOCATION New York, NY

Members Present	Chapter Position	Voting Status	Members Present	Chapter Position	Voting Status
Mr Ronnie R Moffitt, PE	Chair	Yes	Prof Michael M Ohadi, PhD, PhD	MEMBER NON QUORUM	Yes
Mr Paul L Pieper, Eng, PE	Vice Chair	No			
Mr Matthew Friedlander	Secretary	No			
Dr Prakash R Dhamshala	Handbook Subcommittee Chair	Yes			
Ms Helen Deborah Davis	Program Subcommittee Chair	Yes			
Mr Robert W Besant	Research Subcommittee Chair	No			
Mr Bede W Wellford	MEMBER NON QUORUM	Yes			
Mr John T Dieckmann	Member	Yes			
Mr Drake H Erbe	Member	Yes			
Xuan Le	Member	Yes			
Dr Gursaran D Mathur, PE	Member	Yes			

DISTRIBUTION

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

TAC Section Head: Mr Walter T Grondzik	gzik@polaris.net
TAC Chair: Mr Kenneth C Peet	kcpeet1@gmail.com
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Mr Hugh D McMillan, III hmcmillan3@comcast.net Mr James A Arnold, PE jim@haslettmechanical.com Mr Patrick C Marks, PE patrick.c.marks@jci.com Dr Piotr A Domanski piotr.domanski@nist.gov Mr Rick A Larson rick.ashrae@gmail.com Mr Michael R Vaughn MORTS@ashrae.net
TC 5.5 Membership	TC0505@ashrae.net

General

1. Call to Order / Welcome
Ronnie Moffitt calls to Order 15:35 / 3:35 pm.
2. Introduction & Sign up (Current e-Mail & updates)
3. Roll Call
See attendee list. Attendance: 8 out of 7 voting members present, quorum achieved All voting members present plus one non-quorum voting member
4. Dieckman moves to approve the minutes; seconded by Pieper. No discussion. **8-0-0-CNV**
5. Chair's Report (Ronnie Moffitt)
 - a. Noted to applause that the recipient of this year's Hightower award is G D Mathur.
 - b. Technical Committees will now receive merit points for orderly and productive process and an annual award will be issued to the TC with the most points.
 - c. TC members are encouraged to review the ASHRAE Code of Ethics.
 - d. A new MTG for Hot Climate Design Guide is being formed. It was thought desirable to have a TC 5.5 member.
 - e. Interested members are encouraged to contact the Chair if they are interested in being included in the list of resources for review of papers.
 - f. There is a new ASHRAE Exchange website www.ashraexchange.org.
 - g. Members are reminded to update their ASHRAE bios including their employment disciplines.

Subcommittee Reports

1. Handbook (Prakash Damshala / GD Mathur)

The chapter is due for revision and must be submitted in April 2015. Members who are interested in review the current document should contact the Chair for a copy; comments should be returned by summer 2014.

Damshala enumerated some potential new topics for the chapter:

1. Application of heat-pump driven two-wheel desiccant wheel system that has potential energy cost savings up to 16-36%.
2. Significance of optimal control strategy for maximum energy cost savings, including consideration of DCV;
3. Ventilation strategy for passive school buildings to enhance the comfortable conditions by diluting the temperature and pollutant stratification;
4. Second-law efficiency of recovery systems and its implications.
Nanoparticle enhancement of exchange surfaces.

Erbe proposed and Davis second: To form a SC to provide content addressing item #2, above, with membership comprised of Friedlander, Davis, Moffitt, Erb, Mathur.

PASSED 10-0-0-CNV.

2. Program (Helen Davis)

SC chair Davis reported that the TC's program proposal for NYC was rejected. Davis led discussion of plans for the next three meetings:

Track 6: Standards Guidelines and Goals (Moffitt chairs)

- a. Change in 90.1 affecting ERV (Pieper);
- b. Review of AHRI Guidelines V &W, and AHRI Cert program (Davis)

- c. ISO Standard (Friedlander).

Scofield suggests that 5.7 Evaporative Cooling could accept one speaker from TC 5.5 to fill out and co-sponsor their seminar in the same track. Pieper volunteers to do a case study presentation for them.

Deadline for submittal of the program proposal for Seattle is February 13.

Chicago:

ERV and IAQ.

- a. Enthalpy Recovery for Dry Climates,
- b. DOAS that includes energy recovery combined with VRF
- c. ERV for in suite ventilation for multifamily dwellings
- d. Direct/indirect evaporative cooling, and
- e. Effective use of ERV with economizers.

HRV can be used in compliance to Chicago code. Dobbs has a contact in Chicago with expertise. Deadline for abstract submission is March 24, complete paper by July 7.

Atlanta: Volunteers were identified to plan for seminar and/or seminar papers. (Erb, Erbe, Rice)

Davis moved, Pieper seconded, that the Seattle program as described above be proposed. Motion passed **10-0-0-CNV**.

Dieckmann reported on a contract to develop a new DOAS Design Guide (1712). The first contractor was terminated, and selection of another contractor is now underway.

3. Research (Bob Besant)

Dr. Besant discussed a 3-part RTAR proposal, and reported that the Research SC had recommended moving forward, but to divide the RTAR into three parts, with some simplification. The three parts can be described as (1) Determination of Exhaust Contamination Transfer Ratio (ECTR) for ERVs; (2) Determination of capability of transient testing methodology for wheel-type ERVs; and (3) Determination of performance parameters for air-to-liquid heat and humidity transfer systems in liquid run-around systems. He reported that the chair of TC 2.3 had expressed interest in supporting the portion of the RTAR relating to the first segment.

A working group consisting of Erb, Friedlander and Moffitt, will divide the document presented by Dr. Besant into three stand-alone RTARs, for submittal by May 15.

Dr. Besant reported that having served on the Research SC for several decades, he wishes to retire from that position. He was presented with several insignia of recognition, and honored for his work as a mentor and contributor to the technology.

Moffitt announced that he would appoint Erb as Research SC.

4. Standard 84 (Matt Friedlander)

Friedlander reported that the 1st of the above-mentioned RTARs may provide content for the next revision of 84. There is also a chance that efforts now underway at the ITS test facility to develop methods to measure condensate may provide content for the next revision..

5. Website (Dieckmann)

The website will now be maintained by John Dieckmann.

John D. presented updates on 1565-RP Development of the ASHRAE Design Guide for Dedicated Outdoor-Air Systems

6. Membership (Ronnie Moffitt)

No Updates.

Liaison Reports

1. SSPC 189.1 (Drake Erbe)
189.1 is not touching ERV at this point, but there is some activity on 90.1.
2. SSPC 90.1 (Drake Erbe)
Erbe reported that the IECC adopted the 90.1 requirements for ERV as reflected in the two tables 6.5.6.1&2. The fan power limitation working group is intended to begin work shortly; Moffitt and Friedlander have volunteered to support that group. Addendum g, which clarifies the fan power credit equation, will go into public review in May.
The 2016 work plan now includes addressing changes required by the new climate data contained in 169.
3. Standard 62.1 (Hoy Bohannon)
Addendum k relating to classification of laboratory hood air will be going out for public review shortly.
Discussion is ongoing related to the standing question of whether the “area” ventilation rate must be provided during unoccupied periods. This reflects a trend towards reducing ventilation rates in order to reduce energy use.
4. TC 7.8 (Klas Haglid)
Not present.

Other Old Business

TAC

New Business

Paul A. of the National Research Council of Canada reported on two initiatives by NRC:

The NRC High Performance Buildings (HPB) program is sponsored by utility companies and building owners to carry out R&D work to reduce utility bills for commercial and institutional buildings. This will include work in identifying methods and materials to improve the efficiency of heat and energy recovery.

The NRC Building Regulations for Market Acceptance (BRMA) program looks at how performance based specifications can accelerate the market acceptance of products. Under the BRMA program, they will continue to investigate and reduce cross contamination of exhaust air with outside air into the building

Meeting adjourned at 5:55 pm.

Attendees

Present	Full Name	Company
	Mr Ronnie R Moffitt, PE	Trane
	Mr Paul L Pieper, Eng, PE	Venmar CES Inc.
	Mr Matthew Friedlander	Renewaite LLC
	Dr Prakash R Dhamshala	The University Of Tenn At Chattanooga
	Ms Helen Deborah Davis	AHRI
	Mr Robert W Besant	University of Saskatchewan
	Mr Bede W Wellford	Viessmann Manufacturing Co
	Mr John T Dieckmann	TIAX LLC
	Mr Drake H Erbe	Airxchange Inc
	Xuan Le	Kraton Polymers USA LLC
	Dr Gursaran D Mathur, PE	Calsonic Kansei North America
	Mr George W Austin, Jr	Shultz Engineering Group
	Mr Hoy R Bohanon, Jr	Working Buildings
	Mr Wayne E Caudle	Rotor Source Inc
	Mr Peter K Grinbergs	Airia Residential Systems Inc
	Mr Byron F Horak	Intertek Testing Services
	Mr James Martin	Munters
	Mr Tom Rice	SEMCO Incorporated
	Mr Clifford M Scofield	Conservation Mechanical Systems
	Dr Carey J Simonson, PhD	University of Saskatchewan

Guests

James Scudamore	Airia Brands
Colin Beattie	Concordia Univ
Vijay Penannan	Munters
Paul Lebbin	Nantional Research Council Canada
Tim Roberts	Parker Sporlan
Marcus Darcy	Heat Pipe Technology
John Woollett	Swegon