

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS, INC.
1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400**

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. 5.5 DATE 2014-7-1

TC/TG/MTG/TRG TITLE Air to Air Energy Recovery
DATE OF MEETING July 1, 2014 LOCATION Seattle

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Mr Ronnie R Moffitt, PE, Chair VM		Prakash Dhamshala VM		
Mr Paul L Pieper, Eng, PE, Vice Chair		Prof. Michael M Ohadi PhD Member non-quorum		
Matthew Friedlander, Secretary		Bede Wellford Member non-quorum		
Helen Davis, AHRI VM				
John T Diedkmann VM				
Drake Erbe VM				
Xuan Le, VM				
Dr. Gursaran D Mathur, PE, VM				

DISTRIBUTION

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

TAC Section Head:	Mr Walter T Grondzik
TAC Chair:	Mr Kenneth C Peet
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:	Mr Hugh DMcMillan, III hmcmillan3@comcast.net Mr James A Arnold, PE jim@haslettmechanical.com Mr Patrick CMarks, 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
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn
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: 6 out of 7 voting members present, quorum achieved. All voting members present plus one non-quorum voting member

4. Davis moves to approve the minutes; seconded by Dieckman. No discussion. 5-0-0-CNV

5. Presentation by Susanna Hanson and Reid Hart from 90.1. They proposed changes to Table 6.5.6.2 and to Exception 8. Discussion followed. Moffitt and Friedlander are participating in the 90.1 MSC Energy Recovery Work Group led by Reid Hart and will participate in editing the proposed changes. Hanson and Hart also proposed a change to the expression for minimum ERV effectiveness in 6.5.6.2..

5. Chair's Report (Ronnie Moffitt)

Requested TC 5.5 participants to update their listings of expertise for purpose of peer review.

CEC is considering penalties for late upload of presentation. Moffitt noted we have met our deadlines.

Reminded TC 5.5 participants they can request thank-you letters be sent to their employers in consideration of their contributions.

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. Final submittal is due by June 2015.

Mathur expressed the need to simplify the content of the chapter for easier use by specifying engineers. 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.

It was noted that SC had been formed at the New York meeting to provide content addressing item #2, above, with membership comprised of Friedlander, Davis, Moffitt and Mathur.

2. Program (Davis).

Davis reported that this committee is sponsoring a seminar at this meeting.

Davis led a discussion of possible topic for Chicago: state of the code requirements in Chicago, why the codes exclude various ERV technologies, and what the ERV technologies existing today can do to address the concerns.

Davis led discussion of possible topics for Atlanta:

Use of ERV for heat recovery and humidification in cold climate: Mike Scofield proposed to submit a paper.

Proper control of ERV.

90.1 recommendations for Economizer and ERV operation: Paul Pieper proposed to submit a paper.

Seminar on maintenance for Orlanda, co-sponsored with TC 7.3.

The following topics for future events:

- 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.

John D. presented updates on 1565-RP Development of the ASHRAE Design Guide for Dedicated Outdoor-Air Systems. He reported that the contract has been awarded to the Sustainable Engineering Group in Madison, WI, and the expected completion date is November 2016. John is seeking volunteers to serve on the Project Monitoring Subcommittee.

Research SC

Moffitt reported that Dr. Bob Besant had retired from leadership of the Research SC, and his replacement, Blake Erb, has also moved to a previous position, so a Research SC chair needs to be appointed. He asked for volunteers for the SC. Possible candidates include John Dieckman, Xuan Le, Paul Piper, Tom Rice, John Woollett.

As reported in New York, an extensive RTAR document developed by Dr. Besant had been passed to Blake Erb for sub-division into three stand-alone RTARs. Pieper will get the work 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.

Standards SC. Friedlander asked for input as to when and how Standard 84 should next be reviewed, whether for significant update or for re-affirmation. The sense of the committee was that re-affirmation would be appropriate. Work on characterization of exhaust air contaminant recapture should be handled in a separate standard following completion of RTAR 1 mentioned above.

Website SC. Dieckman submitted a written report, attached. Effective this meeting Paul Pieper will serve as webmaster. Dieckman was acknowledged by the Chair for his excellent work in updating and maintaining the site.

Membership

The Chair reported on membership changes due to career changes. New members can only be added at the Winter meeting.

Liaison Reports

1. ASHRAE Learning Institute (Paul Pieper) Pieper is in the process of updating the two courses and splitting them into three courses. He seeks input from committee participants by September 2014.
2. SSPC 90.1 (Drake Erbe)
Mr. Erbe reported that the 90.1 mechanical subcommittee is moving towards an additional addendum which would remove the fan power credit for fully ducted returns. He also expressed the importance of complete and detailed reports to 90.1 by the TC 5.5 liaison.
3. SSPC 189.1 (Drake Erbe). No changes to report.
4. Standard 62.1 (Moffitt/Erbe/Rice) Addendum k is moving forward to publication. SPC 62 is considering allowing ventilation during "occupied periods" be set to zero for spaces when not occupied. 62.1 and 62.2 are proposing scope changes such that ventilation rates for all living areas will be controlled by 62.2 regardless of building height. Since only two comments were received, it is likely this proposal will proceed to SSPC.

Meeting adjourned at 18:05.

Attendees

Full Name	Company
Mr Ronnie R Moffitt, PE	Trane
Mr Paul L Pieper, Eng, PE	Venmar CES Inc.
Mr Matthew Friedlander	Renewaïre LLC
Dr Prakash R Dhamshala	The University Of Tenn At Chattanooga
Ms Helen Deborah Davis	AHRI
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 Byron F Horak	Intertek Testing Services
Mr Tom Rice	SEMCO Incorporated
Mr C. Mike Scofield	Conservation Mechanical Systems
Marcus Darcy	Heat Pipe Technology
John Woollett	Swegon
George W Austin, Jr.	Shultz Engineering Group
Thomas Kitchen	Semco
Dennis Manthee	Multistack
James Dean	dPoint
Amit Gitterman	Advantix
Ranil Modi	Advantix
Elliott Horner	UL Environment
Reid Hart	PNNL
Andrew Moore	Mitsubishi Electric
Dr Zidu Ma	Carrier
James Piscopo	Ballinger