

**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. 5.5 DATE XXXX-XX-XX

TC/TG/MTG/TRG TITLE Air to Air Energy Recovery
DATE OF MEETING June 30, 2015 LOCATION Atlanta, GA

MEMBERS PRESENT	YEAR APPTD	MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT
Paul L Pieper, Eng, PE VM Vice Chair	2014	X	2014	Peter K Grinbergs VM Non Quorum
Matthew Friedlander VM Secretary	2013	X	2012	Bede Wellford VM Non Quorum
Helen Davis VM Programs	2014			
Dr. Gursaran D Mathur, PE VM Handbook	2014	X		
Mr Ronnie R Moffitt, PE VM Chair	2013	X		
John T Dieckmann VM Research	2014	X		
Drake Erbe, VM	2012	X		
Tom Rice VM	2014	X		

DISTRIBUTION

<i>All Members of TC/TG/MTG/TRG plus the following:</i>	
TAC Section Head:	Mr Kenneth C Peet kcpeet1@gmail.com
TAC Chair:	Dr Thomas M Lawrence lawrence@engr.uga.edu
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:	Cameron R Labunski PE, cameronl@tgce.com James A Arnold, PE, jim@haslettmechanical.com Patrick C Marks, PE patrick.c.marks@jci.com David A John, PE, davidjohntarpon@gmail.com Dr Arsen K Melikov, PhD, akm@byg.dtu.dk 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

Meeting was called to order by Chair Moffitt at 3:30.

Following introductions, it was determined that 5 of 7 Voting Members were present, achieving quorum. A sixth voting member joined the meeting later.

Motion by Le, seconded by Pieper to approve the minutes of the 1/27/2015 meeting passed 4 yes/0 no/Chair not voting.

Chair's Report – Moffitt

Moffitt reported that changes to the ASHRAE website have been made in an effort to make applying for TC membership easier.

The Research Administration Committee is now emphasizing work on residential issues.

Mike Vaughn, Manager of Research and Technical Services at ASHRAE, is encouraging use of web meetings for work sessions.

Moffitt reported that TC 5.2 "Duct Design" is proposing a scope change from "ducts" to "duct systems" and requested TC members to register their concerns with TC5 Section Head Ken Peet.

Sub-committee Reports

Handbook SC – Mathur/Dhamshala

No progress has been made in updating content for the next edition of the TC's handbook chapter. There is no draft at this time. The due date for the final draft is the first week in September 2015. Chair will distribute WORD file of current chapter to Voting members and Handbook Sub-Committee members.

Program SC – Moffitt

Proposed topics for Orlando were discussed, including:

Great Debate track: "90.1 requires the use of Energy Recovery Ventilation" argued by a specifying engineer, vs. "90.1 never requires me to use Energy Recovery Ventilation" argued by Brandon Dumas.

Advanced topics: "How enthalpy plate exchanger membranes work"; "Liquid desiccant plate and spray systems".

Residential topics: "Ventilation and energy recovery in high-rise residential units now covered by 90.1", "Where do codes require residential Energy Recovery Ventilation?", "Common residential installation practices for Energy Recovery Ventilation".

Research – Dieckmann

PES/DOAS Guide Update: a first chapter has been drafted by the contractor (Sustainable Engineering Group) and commented on by the Project Monitoring Subcommittee. Energy Recovery Ventilation appears to be getting appropriate inclusion. Draft chapters are planned to be generated every two months and so far progress appears satisfactory. Final draft is expected in November '16, with publication targeted for 2017.

Dieckmann reported on two RTAR proposals the drafting of which was endorsed by the TC at the Chicago winter meeting in 2015:

- 1) Research and validate methods to scale large-exchanger performance from small-exchanger testing. A draft was reviewed by the Research Sub-Committee and John proposes to incorporate the feedback received into an edited RTAR proposal for letter ballot to the TC later this summer.
- 2) ERV modeling in commercially-available non-manufacturer-specific building energy modelling software: the TC needs to get an understanding of what problems exist so that the value of the RTAR can be demonstrated.

Nick Agopian discussed with the TC an RTAR concept under consideration by TC 2.3 Gaseous Air Contaminants and Gas Contaminant Removal Equipment. The RTAR would seek to quantify chemical transfer and/or rejection effectiveness of enthalpy wheel and plates, with particular interest in photo-catalytic and oxidation reactions that may occur with ozone and representative VOCs.

TC 5.5 expressed interest in review and sponsoring the RTAR.

Tom Rice indicated that TC 9.10 Laboratory Systems has proposed an RTAR to develop methods of test to quantify recapture of contaminants in Energy Recovery Ventilation devices used in Laboratory ventilation systems. He will forward a copy of the RTAR to TC 5.5.

Moffitt reported that ASHRAE is considering forming a Multi-disciplinary Task Group (MTG) to quantify avoided source energy consumption due to recovering energy. This would be called the MTG.ASEC.

Motion by Friedlander, second by Pieper to express interest in formation of the MTG.

Motion passed 6/0/0.

Website- Le

Le reported the site is up to date as of today. ASHRAE is introducing some new site technology for which all the webmasters will receive training.

Standard 84 – Friedlander

Friedlander reported that the Standard was most recently published in 2013, and thus in principle requires affirmation, revision or withdrawal in 2018. He proposed a work plan in which a call for SPC candidates could be made at the Summer Meeting in 2016. Identified goals of the revision would be editing for clarity and normative language, and inclusion if possible of methods of test for alternating-mass exchangers. Adam Fecteau volunteered to forward contact information for a group that is commercializing alternating-mass exchangers.

Liaison Reports

ALI Short Courses – Pieper

Pieper distributed a draft Table of Contents showing how he plans to divide up the existing two short courses into an expanded set of three courses. Pieper request feedback by Friday July 10.

90.1 Liaison Report – Friedlander

Friedlander reported on two proposed new addenda of interest to the TC.

Addendum cb would change and in general increase duct insulation requirements.

Addendum ce would add lower limits of 40, 80 and 120 CFM for Fan Supply airflow, depending on climate, to the Energy Recovery Ventilation requirements in Table 6.5.6.1. The intent is to correct the inadvertent requirement for Energy Recovery Ventilation in small high-rise dwelling units which was a collateral result of 62.2's scope change to include these dwelling units. The scope change brought those units into the purview of Table 6.5.6.1, but small distributed Energy Recovery Ventilation units had not been considered in the cost-benefit analysis performed in development of the Table. This addendum is subject to a continuation ballot so it may or may not move forward to a Public Review.

The original Addendum ar replaced the term "effectiveness" with "enthalpy recovery ratio" and "sensible energy recovery ratio" as appropriate in section 6.5.6.1 with the intent of making the language consistent with other standards and industry usage. The addendum will be re-introduced in order to correct the omission of "entering" in the exhaust air which is equivalent to return air. In one area, 6.5.6.1, the original addendum ar left the word "return" air while the other instances were changed to "exhaust" air. This ISC corrects them all to refer to the "entering exhaust" air of the energy recovery device.

Addendum aw would require required ganging of exhausts when located within a certain distance in order to eliminate an exemption to the requirements for energy recovery ventilation in 6.5.6.1.

Both addendum ar and aw are expected to open for Public Review shortly.

62.2 – Bohannon

Bohannon has been appointed Chair of 62.1. Noted that the 62.2 scope has been changed to cover all structures where people sleep for more than 30 days, not just those under 3 stories. Between now and publication of 2016 version, the only anticipated changes are for greater compliance with code-mandatory language protocols.

Discussion: how to initiate a change proposal in, e.g. 90.1. Propose formation of a WG of which a 90.1 SC voting member is the chair. Members were reminded that anyone can issue a Continuous Maintenance Proposal.

Membership:

Effective July 1, Paul Pieper will replace Ronnie Moffitt as Chair.

Matthew Friedlander will replace Pieper as Vice Chair.

~~Helen Davis~~ Tom Rice will replace Friedlander as Secretary.

Ronnie Moffitt will replace Helen Davis as Program SC Chair.

Xuan Le will become a Voting Member.

Gursaran Mathur continues as Handbook SC Chair, John Dieckmann continues as Research Chair.

Other Business:

Ronnie was thanked for his service as Chair.

Meeting was adjourned at 6:15.

Other attendees:

Marcus D'Arb, Heat Pipe Technology

Adam Fecteau, Aldes Ventilation

James Scudamore, Airia Brands

Brandon Damas, HTS

Pat Marks, Johnson Controls

Mark Piegay, Alfa-Laval

Mike Harveym Alfa-Laval

John Woollett, Swegon

Nick Agopian, Renewaire

Xuan Le, Kraton