

**Main Meeting Minutes  
ASHRAE Technical Committee 5.3  
Room Air Distribution  
Las Vegas, NV  
February 1, 2011**

1. **Call to Order (Gus Faris) called to order at 1PM**
2. **Introductions / Attendance Sheet / Verify Quorum (Gus Faris)**

**15 voting present of 18 voting members**

3. **Accept Agenda and Approve Minutes of (Gus Faris)**
  - a. **Minutes approved 11-0-0-6-CNV(Yea-Nay-Abstain-Absent)**
4. **Membership (Fred Lorch)**
  - a. **Attendance at meetings and assist with committee work will progress from visitor to corresponding to non-voting to voting over time. If you fail to attend on a regular basis, you will progress from voting to non-voting to corresponding to visitor to a fond (hopefully) memory.**
  - b. **Gus appointed David John as Historian for TC 5.3**

**Members rolling off after Summer Meeting:**

**Eugene Faris  
Hans Levy  
Walter Schwarz  
Jianshun Zhang  
Arsen Melikov**

**New Voting Members after Summer Meeting:**

**Fred Bauman  
Darren Alexander  
Brian Rock  
Jack Stegall  
Mick Holland**

**New Corresponding Members after Summer Meeting:**

**Luca Stefanutti  
John Gierzak  
Mladen Habensus  
Chad Huggins  
Mike Tardiff  
Brad Tully**

**Members deleted from roster after Summer Meeting:**

**Duncan Phillips  
Jeffrey Stein**

5. **Section Head / Society Announcements (Gus Faris)**
  - a. **ASHRAE is taking more notice of MBO (subcommittee Chairs are required to report on their activities)**
  - b. **ASHRAE once again is considering requiring speakers to pay registration fees instead of having complimentary registration**
    - i. **14-0-0-3-CNV**

## 6. Research Subcommittee (Ken Loudermilk)

### Ongoing Research Projects

1335 -TRP Effects of Typical Inlet conditions on Air Outlet Performance. – PI  
Needs to file updated contract end date

PMS: D. John (Chair), K. Loudermilk, J. Stegall, L. Kloostra, G.  
Richardson

Report presented by: BJ Lansberger.

Tour of UNLV facilities was offered to interested parties.

1522-TRP Establishment of Design Procedures to Predict Room Airflow  
Requirements in Partially Mixed Room Air Distribution Systems.

PMS: K. Loudermilk (Chair), A. Livchak, J. Aswegan, J. Rimmer, F.  
Bauman

Update given by: Ken Loudermilk – Project is on track

### Past Research Projects

1292 – TRP Disposition form needs to be filed

1373 – TRP Disposition form needs to be filed

1438 – TRP Disposition form needs to be filed

### ACTIVE WORKSTATEMENTS

- WS 1500 Terminal Unit Design Guide (David John) – Disposition form needs to be filed
  - Waiting on results from a Texas A&M project
  - Tentative plan to submit prior to next meeting
- WS 1546 Expansion and Update of ADPI (David John) - was accepted by RAC
  - Submitted for review at the Winter Meeting 2011
- 1624 Effective Energy-Efficient School Classroom Ventilation (TC 2.1)
  - Jerry Sipes is liaison from TC 5.3
  - Comments were received back and the WS will be reworked and submitted.

### ACTIVE RTAR proposals

- RTAR 1629 Testing and Modeling Energy Performance of Active Chilled Beam Systems (Fred Bauman)

### NEW RTAR proposals

- RTAR Understanding the pressure drop and temperature measurement in coil performance testing for Standard 79 (Bryon Hagen)
- RTAR Effect on Ventilation Effectiveness of Passive Beams on Stratified Air Distribution Systems (Fred Bauman and Julian Rimmer)

### URP proposals

- None

### Non-ASHRAE research reported by Gus Faris:

ECM vs PSC motors in terminal units. This project is a follow up to 1292.  
The results will be donated to any VAV manufacturer who requests it

An electronic tool will be provided as well  
Anyone who would like to attend the wrap up meeting for this project will be welcomed. Submit your name to Gus Faris.

7. **Handbook Subcommittee (Tenison Stone)**
  - a. **A vote to submit the system and equipment chapter edits for publication. Dan Int-Hout moved to approve as written, Fred Lorch seconded. Motion passed: 14-0-0-4-CV**  
**Tennison moved that videos be added to online-plus passed 14-0-0-4-CV**
8. **Standards Subcommittee (Fred Lorch)**
  - a. **ASHRAE Standard 79-2002 (RA 2006)**
    - i. **Byron Hagen chair reported on the initial meeting on Std 79**
  - b. **ASHRAE Standard 70-2006**
    - i. **Was reaffirmed in Albuquerque**
  - c. **ASHRAE Standard 130**
    - i. **Brad Tully is the proposed chair**
    - ii. **TC 5.3 voted on revising 13-0-0-4-CNV**
  - d. **ASHRAE Standard 129**
    - i. **David John reported on the status**
  - e. **ASHRAE Standard 200**
    - i. **Jerry Sipes reported on the status**

9. **Program (Andrey Livchak)**  
2011 Winter Conference  
January 29-February 2, 2011  
Las Vegas, Nevada  
Theme: Zero Energy Design

Program

Energy and Comfort Performance of Active Chilled Beams Systems  
Chair: Fred Bauman

- 2011 Annual Conference  
June 25-29, 2011  
Montreal, Quebec, Canada  
**Deadline for submission Feb. 14<sup>th</sup>.**  
Theme: Net-Zero Buildings

Modeling Tools for Underfloor Air Distribution (UFAD) Design and Applications

Chair: Fred Bauman

Speakers:

1. Kishor Khankari -- CFD methods
2. Tom Webster -- Whole-building energy simulation
3. Yan Chen -- Simplified design tool

Modeling and Comparison of ECM and PSC Motors in Series

and Parallel Fan Powered VAV Terminal Units

Chair: Gus Faris

1. Dennis O'Neal "Performance of Series Fan Powered Terminal Units with Electronically Commutated Motors"
2. Dennis O'Neal "Performance of Parallel Fan Powered Terminal Units with Electronically Commutated Motors"

2012 Winter Conference

January 21-25

Chicago

Program

Introduction to the ASHRAE/REHVA chilled beam guide

Chair: Mick Holland

Speakers:

1. Chris Lowell "Active Beams"
2. Mick Holland "Passive Beams"
3. Ken Loudermilk "Controls"
4. Carlos Lisboa "Energy Study"

RP 1335 Results: Effects of Typical Inlet Conditions on Air Outlet Performance.

Chair: David John

Speakers?

2012 Annual Conference

June 23-28

San Antonio

Program:

Chilled beams...

Chair – Julian Rimmer

Speakers?

2013 Winter Conference

January 26-30

Dallas

2013 Annual Conference

June 22-26

Denver

#### **10. Chilled Beam Report (Ken Loudermilk)**

Call to order: Ken called to order at 11:30 AM

Minutes from Albuquerque reviewed

Attendees list available upon request

Handbook – DA

Systems and Equipment chapter was worked on at this meeting  
Fundamentals chapter does not currently include chilled beams.

Program – AL

One session at the LV conference, FB Chair  
Program for Chicago, MH Chair  
ASHRAE / REHVA group to develop a program based on the application guide  
Intermediate session on CBs and HVAC fundamentals, DH Chair  
    Pycrometrics  
    Controls?  
    Energy?

Standards – JS

Standard 200 is starting discussion on test methods – come to Monday meeting N240  
AHRI activities  
    Compliance method being worked on currently, waiting on A200  
Do not need to wait for standard substantive completion for reviewing portions

Research – JS

**RTAR 1629 - Testing and Modeling Energy Performance of Active Chilled Beam Systems**

Comments from RAC, resubmitted

The effect of passive chilled beams on the ACE and CRE performance of stratified systems – JR, FB, MH  
Will be prepared for Montreal

ASHRAE / REHVA design guide update – MH

Mick provided update  
PS – Need to think about review process

Liaisons

ASHRAE Standard 170 – KL  
    Addendum H – went out for public review  
AHRI  
    Sent IR to IBC regarding drain pans in beams

New Business

Rename subcommittee, standards, and handbooks to remove the term “Chilled”

Other issues

Next meeting will be 90min in duration

Adjournment Ken adjourned at 1:17 PM

**11. Fan Coils (Gus Faris)**

Review Minutes from Albuquerque

Jerry Moved to Approve these.

Byron Seconded

Unanimously Approved

Handbook

Byron

Review of Handbook Session for Systems and Equipment section, Inserting fan coils.

Added DX-steam Coils are part of this section.

Byron

Future activity for Handbook chapters

Research

Solicit ideas for future Fan Coil research

STD 79 water pressure drop measurement location.

Byron to Submit.

Program

Provide ideas and timing for a Forum for Standard 79 proposed changes

Jerry Moved to Drop this acoustic Forum as it has been decided to add this to 79.

Gaylon Second

Unanimously Approved

New Program ideas

The Application of ECM Motors. John Bade to Chair.

Standards

Standard 79-2006

Need membership for standard.

All Manufactures need to bring a non Manufacture to the standard committee. There must be a balance from the categories of General, Users, Producers

First meeting was Saturday morning – review status and progress

Work Plan to be submitted.

TPS Change to be submitted.

The Standard was broken into sections and working groups were formed to review and edit sections

Gaylon R is Vice Chair

Mike F is Secretary

Sound Measurements will be added to the standard.

Byron will Review STD 33.

New Business

How will 90.1 Leakage Standard effect ducted fan coils?  
Approach 193 to remove Fan coils and work a leakage test into STD 79.  
John Bade to Champion this.

Close meeting  
Jerry Moved.

#### **12. Webmaster Report (Kevin Gebke)**

Kevin Gebke reported that there has been nothing but positive feedback on the TC 5.3 website. He encouraged all committee members to keep in mind that the website can be a useful tool in communicating. Please discuss any possibilities of website use with Kevin.

#### **13. Liaison Report(s)**

**Standards 55, 62.1, 90.1**

**Dan Int-Hout reported on 55**

**Dan Int-Hout reported on 62.1**

**Gus Faris reported on 90.1**

- **Terminal unit leakage is a topic of concern**
  - **A table of leakage rates was compiled and is waiting on AHRI ACDD vote**

**Leon Kloostra reported on SSPC 170**

- **Addendum H has been approved**
  - **Chilled Beams will be acceptable for use in patient rooms**
- **Addendum G (displacement) will be covered at April meeting in Chicago**

**TC's 2.1, 2.6, 4.1, 4.3, 4.10, 5.2, 6.5, 7.7, 9.1, 9.6, 9.8, Other**

2.6 – Patrick Oliver reported on the lined ductwork testing for various liners at UNLV

4.1 – Fred Bauman reported on load calcs efforts

4.3 – Brian Rock reported that they are interested in the work of SPC 129

5.2 – Kevin Gebke reported that they are working on a duct design guide\

7.7 – Gaylon Richard reported that SPC 111 is being opened for review

9.6 – Fred Lorch reported that the patient room research is almost complete

9.8 – Jim Aswegan reported nothing of interest to TC 5.3 occurred

#### **TRG-7 UFAD, AHRI-880 and AHRI 885**

Dan Int-hout reported on TRG7-UFAD: 80% complete on rough drafts

David John reported on AHRI 880 TU leakage and end reflection is changed.

Dan Int-Hout reported on AHRI 885 – A spreadsheet for NC calcs is being submitted again to ASHRAE once again.

#### **USGBC**

Dan Int-Hout reported that 40 dBA will be a prerequisite for background sound in schools starting in 2012.

#### **REVHA**

Mick Holland reported that working groups meet and progress has been made on the design guide. They are meeting tomorrow again and then a web meeting in March, followed by a meeting in Thailand in May 2011

#### **14. Honors and Awards (Mo Hosni)**

- a. **He has developed a list of awards and deadlines that will be given to Kevin Gebke for posting on the TC 5.3 website**
- b. **Many members of TC 5.3 qualify for awards and should consider evaluating their points.**

**15. REHVA**

**16. New Business (Gus Faris)**

Hans Levy brought up that there is a filter that is almost as good as a HEPA filter but has a lower pressure drop.

Gus Faris moved that ASHRAE do a better job of keeping the TC's aware of activities that pertain to their area of expertise. Ken Loudermilk seconded. Vote was 15-0-0-3-CV

**17. Adjourn**