



ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers Inc.

1791 Tullie Circle, NE • Atlanta, Georgia 30329-2305 ☎ 404-636-8400 • Fax 404-321-5478

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.: TC 9.01 ISSUE DATE: February 18,2011

TC/TG/TRG TITLE: Large Building Air-Conditioning Systems

DATE OF MEETING: June 28., 2011 LOCATION: Montreal,PQ , Canada

MEMBERS PRESENT	TERM END	MEMBERS ABSENT	TERM END	ADDITIONAL ATTENDANCE
<u>Members:</u> Stephen W Duda, Chair Jeff Traylor Warren G. Hahn Harvey Brickman Bill Klock Mark Fly Lynn Werman John L Kuempel Jr Sec Douglas Cochrane Charles E. Henck Ronald Millies, Jr. John Wolfert	<u>June 30 of</u> 2011 2011 2013 2012 2013 2013 2013 2014 2013 2013 2012 2013	<u>Members:</u> Dennis Wessel Kenneth E. Gill Alonzo B. Blalock K Quinn Hart Gene R Strehlow Phil Trafton Rodney an H. Lewis Hollace Bailey	<u>June 30 of</u> 2012 2011 2011 2014 2014 2014 2014 2013	<u>Corresponding Members:</u> Kelley P Cramm, V Chair John I Vucci Jay Eldridge Howard J McKew <u>Liaisons / Staff / Ex-Officio Members:</u> Van Baxter <u>Guests:</u> Brett Van Horn Phillip Johnson Steve Nicklas <u>Regulars absent</u> Charles G Arnold Amanda McKew Gil Avery
<u>International Members:</u> none present				

DISTRIBUTION

ALL MEMBERS OF TC/TG/TRG

TAC COMMITTEE CHAIR: Charles Wilkin

TAC SECTION HEAD: Thomas M Lawerence

LIAISONS:

CEC: Thomas M Lawerence

Publications: Warren Hahn

Handbook: Thomas M Lawerence

Research: Carl Huber

Professional Development: Floentino Mendez

CTTC: Thomas Lewis

Staff Liaison/Research/Technical Services: Michael R Vaughn

Staff Liaison (Standards): Stephanie Reiniche

Standards Liaison: Cecily M grzywacz

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ASHRAE TC/TG/TRG ACTIVITIES SHEET ATTACHMENT

ISSUE DATE: February 9, 2011

TC/TG/TRG NO.: T.C. 9.01 TC/TG/TRG TITLE: Large Building Air-Conditioning Systems

CHAIR: Steve Duda VICE-CHAIR: Kelley Cramm SECRETARY: John Kuempel Jr

TC/TG/TRG MEETING SCHEDULE			
Location - Past 48 Months	Date	Location - Planned Next 36 Months	Date
New York, NY	1.22.2008	Chicago, IL	1.24.2012
Salt Lake City, UT	6.24.2008	San Antonio, TX	6.26.2012
Chicago, IL	1.27.2009	Dallax, TX	1.26.2013
Louisville, KY	6.23.2009	Denver, CO	6.22.2013
Orlando, FL	1.26.2010	New York, New York	1.18.2014
Albuquerque, NM	6.29.2010		
Las Vegas, NV	2.01.2011		
Montreal, PQ (Canada)	6.28.2011		

TC/TG/TRG SUBCOMMITTEES	
Function	Subcommittee Chair
Publications Handbook	Gene Strehlow & Bryan Sherman
Honors and Awards	Jeff Traylor
Publications	Rodney Lewis
Membership Program	Warren Hahn
Research	Lynn Werman
Standards	Dennis Wessel
Standards Issues	William Klock
Webmaster	Charlie Henck
	Rodney Lewis
	Mark Fly

RESEARCH PROJECTS – CURRENT			
Project Title	Contractor	Monitoring Comm. Chairperson	Report Made At Mtg.

LONG RANGE RESEARCH PLAN				
Rank	Title	W/S Written	Approved	To RAC

HANDBOOK RESPONSIBILITIES

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Year & Volume	Chapter Title	Chapter No	Deadline	Lead Reviser / Reviewer
2012 Systems & Equip	HVAC System Analysis and Selection	1	TBA 2011	D. Wessel / Brickman & Fly
2012 Systems & Equip	Decentralized Cooling and Heating	2	TBA 2011	J. Kuempel / Vucci & Duda
2012 Systems & Equip	Centralized Cooling and Heating	3	TBA 2011	W. Klock / Werman & Hart
2012 Systems & Equip	Air-Handling and Distribution	4	TBA 2011	Eldridge / Trafton & Cramm
2012 Systems & Equip	In-Room Units and Distribution	5	TBA 2011	H. Bailey / Strehlow & Hahn

STANDARDS ACTIVITIES - List and Describe Subjects

STD 15-2004 *Safety Standard for Refrigeration Systems* – Continuous Maintenance, Cognizant TC is 9.01, Steve Duda is liaison.
 Guideline 0-2005 *The Commissioning Process* – TC 9.01 is co-cognizant.
 Guideline 16-2003 *Selecting Outdoor, Return, and Relief Dampers for Air-Side Economizer Systems* – Cognizant TC is 9.01.
 Guideline 22—2008 *Instrumentation for Monitoring Central Chilled-Water Plant Efficiency*- Cognizant TC is 9.01

TECHNICAL PAPERS from Sponsored Research – Title, when presented (past 3 yrs. present & planned)

1. None.

TC/TG SPONSORED TRANSACTION SESSIONS – Title, when presented (past 3 yrs. present & planned) & Chair

1. Conference Paper – Rehab for DDC at Corporate National Training Center – Three Years of Therapy - Winter, 2011 – Las Vegas, Blalock
2. Conference Paper - Application of ASHRAE Standard 15-2010 with Respect to Multi-Evaporator Split Air-Conditioning Systems – Summer 2011 – Montreal, Duda

TC SPONSORED SEMINARS – Title, when presented (past 3 years, present, & planned) & Chair; Speaker, Speaker, Speaker

1. *Underfloor Air Distribution: Case Studies & Lessons Learned* (2008 Winter) Brickman; Cooper, Mass, Frank, Morrissey.
2. *Introduction to 2008 Handbook* (2008 Annual – Salt Lake City) / McKew; Duda & Maston.
3. *Case Studies in Sustainable Retrofits to Reduce Energy Use of Existing Buildings* (2009 Winter – Chicago) / Trafton; Kuempel, McKew, Traylor.
4. *Design and Case Studies for Indoor Sports Facilities* (2009 Annual – Louisville) / Trafton; Duda, R. Towell, Cramm.
5. *Design Challenges & Solutions for Entertainment Venues* (2009 Annual – Louisville) / Millies; Kuempel, S. Braden, McKew.
6. *Retrofitting HVAC in Older Buildings for Higher Efficiency* (2010 Annual-Albuquerque) Kuempel,Duda,Cramm
7. *High Performance Run Around Energy Recovery Systems* (2010 Annual – Albuquerque) Niederer
8. *HVAC Security- Less we forget*(2011 winter las vegas) McKew, Cogley, Dobbs,Campbell

TC/TG SPONSORED FORUMS - Title, when presented (past 3 years, present, & planned) & Moderator

1. None.

JOURNAL PUBLICATIONS, when published (past 3 years, present, & planned) & Author

1. *Connecting Buildings To Central Chilled Water Plants* (2007-11) / J. Rishel

Respectfully submitted by:



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TC 9.01 Large Building Air-Conditioning Systems
Meeting Minutes

Meeting Date: June 28, 2011
Montreal, PQ, Canada

I. Call to Order

- a) Chair Duda called the meeting to order at 1:00 PM local time,

II. Introduction of Members And Guest

- a) Self-introductions of members and guests were made around the table as the attendance roster was circulated. Chair Duda welcomed all members and visitors. A quorum was verified.
b) TAC Chair Tom Lawrence addressed the committee. He presented a statement of appreciation to outgoing chair Steve Duda. All members concurred.

Voting Members:	10 Present 8 Absent, Quorum achieved.
International Members:	0 Present
Corresponding Members:	4 Present
Society Liaisons:	1 Present
Staff Liaisons:	0 Present
Guests:	3 Present

Note: International members are voting members if present, but do not count against quorum if absent.

III. Minutes from Orlando, Winter 2010 Meeting

- a) Mark Fly moved that the meeting minutes be approved and Warren Hahn seconded.
b) Motion carried (9-0-0-1-8).

Secretary's Note: All votes recorded herein are formatted as (Aye-Nay-Abstain-Chair not voting-Absent).

IV. Agenda Comments / Updates (S. Duda)

- a) Duda requested changes. None offered.

V. Chairman's Comments and Section 9 Report (S. Duda)

- a) *Steve attended section meeting with Kelley. His report was circulated to all present.*

VI. ASHRAE Liaison Reports

- a) *None Present*

Secatry note: Fly joined meeting late, now 11 voting present

VII. TC 9.01 Subcommittee Reports

- a) Membership (Duda reported):
 - Effective July 1st, 2011, the TC 9.1 Leadership will be as follows:

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- Chair – Kelley Cramm, Vice Chair – John Kuempel, Secretary – Howard McKew,
- Rolling off to CM status J. Wolfert, A. Blalock, K. Gill, J. Traylor, S. Duda
- Joining as Voting Members: K. Cramm, C. Henck, J. Eldridge, H. McKew, J. Vucci
- New Full Corresponding members to be added : S Niklas, D Johnson,

b) Handbook (J. Traylor reporting): Jeff indicated that the chapter reviews were voted on as follows: The votes by e-mail. .

TC-9.1 Handbook 2012

Letter Ballot

- | | | |
|-------------|-----------|----------|
| • Chapter 1 | 11-5-1 | Approved |
| • Chapter 2 | 15-0-0 | Approved |
| • Chapter 3 | Need Vote | Pending |
| • Chapter 4 | Need Vote | Pending |
| • Chapter 5 | 14-0-0 | Approved |

- Chapter 3 was recommended for approval by Jeff at the meeting. Following discussion, moved by Traylor, second by Fly. Approved Vote 9-0-1-1-7
- Chapter 4 still in process with Rodney’s review delayed. This Chapter will be sent for e-mail vote before next meeting by the new rooster.

c) Standards (Traylor):–

Guideline 22

Standards asked us to revise the guideline or re-affirmed as written.

Following discussion, most have had time to review and all felt it should be reaffirmed. Move by Kuempel, second by Brinkman. Approved Vote 10-0-0-1-7

MOT for Fan Coils is now TC 5.3. Discussed requesting Standards to remove TC 9.1 as co-cognizant committee. Move by Traylor, second by Kloch Approved Vote 10-0-0-1-7

Harvey requested that TC request Standards 130 to consider adding chilled beams. Duda to send letter.

d) Research (Klock): Bill Klock was not present to give a report.

- RTAR-1448 – *Chiller Room Ventilation*, PMS: S. Taylor, S. Duda, J. Vucci.

Current formula of 100 square root of weight of refrigerant is being questioned. Discussion has lead to the complexity that is involved with multiple risk factors. More research is needed.

- Letter ballot motion to co-sponsor an RTAR entitled “Comparative Lab and Field Evaluation of Building Pressure Control Methods “ (TO 1.04 and L. Damiano) was defeated by e-mail vote 6-9-0-0 on 2-25-2011

e) Program (Cramm):

The TC9.1 Program Subcommittee is planning the following programs:

Chicago Meeting:

Track 1:

Case Studies: New Equipment, old Buildings How to improve Energy efficiency

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Chair: Kelly Cramm

Speaker: John Kuempel: Geothermal upgraded to Heat Recovery and VRF

Speaker: Howard McKew Chilled water monitoring and Energy Metering on existing CHWater system saves energy

Speaker: Mick Schweidler: Heat recovery chiller s save energy

Future seminars Chilled Beams, Metering for savings,

f) Professional Development (G. Strehlow):

- Please submit any training program ideas to Gene, we need instructors for new programs.

g) Honors & Awards (Duda):

Howard McKew submitted

h) Publications (W. Hahn):

- Duda offered to condense VRV paper into article for Insites .

i) Website Report (M. Fly):

- Mark Fly received several programs from speakers and will be posting them on our website.
- Committee vote needed. Motion Fly second Brinkman 10-0-0-1-7

j) Standards Issues (Lewis):

- No report

VIII. TC/PC Liaison Reports

a) TC 1.12 – Moisture Management in Buildings (Traylor) IAQ conference

b) TC 4.03 – Ventilation and Infiltration (S. Duda) Heavy research ongoing in retail stores and machine rooms

c) TC 6.01 –Hydronic and Steam Heating Equipment and Systems (K. Cramm) Approved Guideline 22, considering writing chapter on chilled water plants.

d) TC 7.05 – Smart Buildings (G. Strehlow): Not Present

e) TC 7.07 – Testing & Balancing (Traylor reporting): NEBB proposal major discussion at this meeting

f) TC 7.09 – Building Commissioning (J. Traylor): Same, NEBB all the hot topic this secession

g) TC 9.06 – Health Care Facilities (Wessel): Not present

h) TC 9.08 – Large Building Air-Conditioning Applications (Nicklos reporting): Working on handbook. New sections on Atriums and places of assembly.

i) TC 9.10 – Laboratory Systems (Lawson): not present.

j) TC 9.12 – Tall Buildings (L. Werman): Focus has been on chapter review.

k) SSPC 62- Indoor Air Quality (Phil trafton) No report

l) SSPC 15 – Mechanical Refrigeration Safety (Duda): New safety class of refrigerant added has to be addressed by standard.

m) TG-2- (McKew) Interested in adding people, only 12 involved

n) TG7 – Under-Floor Air (H. Brickman): Book was published

IX. Old Business

- a) TC 9.01 Title, purpose and scope was discussed, K Gill wanted to review and submit revisions. Still in progress

X. New Business

- a) NEBB/ASHRAE involvement discussed. Action can not be taken as of yet. Many opinions differ on what is being discussed.

XI. Adjournment

- a) Next Meeting: Tuesday, January 24, 2011 at 1:00 pm in Chicago
- b) Meeting adjourned at 3:30 PM. Moved by Jeff Traylor and seconded by Kuempel.

XII. Attachments:

- A: Summary of Motions
- B: Summary of Action Items
- C: Section TC Chair's Breakfast Meeting Minutes

End of Minutes

Respectfully submitted by:

John Kuempel Jr, Secretary

ATTACHMENT "A"

SUMMARY OF MOTIONS:

Secretary's Note: All votes recorded herein are formatted as Aye-Nay-Abstain-Chair Not Voting-Absent.

Motion: Mark Fly.

Second: Warren Haughn

Text: Approve the Montreal Meeting Minutes.

Vote: Motion Carried 9-0-0-1-8
2 members late on this vote

Motion: Jeff Traylor

Second: Mark Fly

Text: Approve Chapter 3 Handbook for publication

Vote: Motion Carried 9-0-1-1-7

Motion: John Kuempel

Second: Harvey Brinkman

Text: Approve Guideline 22 for reaffirmation

Vote: Motion Carried 10-0-0-1-7

Motion: Jeff Traylor

Second: Bill Kloch

Text: Remove TC 9.1 from MOT on Fancoils

Vote: Motion Carried 10-0-0-1-7

Motion: Mark Fly

Second: Harvey Brinkman

Text: Approval of posting previous programs on TC's website

Vote: Motion Carried 10-0-0-1-7

Motion: Jeff Traylor

Second: John Kuempel

Text: Adjourn the meeting.

Vote: Motion Carried 10-0-0-1-7

ATTACHMENT "B"

SUMMARY OF ACTION ITEMS:

Responsible Party: Steve Duda

Action: Send TAC request to include Chilled beams in Standard 130

Due Date: one week

Responsible Party: Steve Duda

Action: . Check to see if Phil Trafton plans to continue attending SSPC 62.

Due Date: No date specified

Responsible Party: Jeff Traylor/Handbook Revisers

Action: . Complete 2012 Handbook 4 letter ballot

Due Date: ASAP
