



**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**

TC/TG/TRG NO.: TC 9.01 ISSUE DATE: July. 11, 2016

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

DATE OF MEETING: June 28, 2016 LOCATION: St Louis, Mo

MEMBERS PRESENT	TERM END	MEMBERS ABSENT	TERM END	ADDITIONAL ATTENDANCE
John Vucci Chair	2017	Jeff Traylor	2016	<b><u>Corresponding Members:</u></b> Jay Eldridge, Sec./ Webmaster John L Kuempel Jr, Program Sub-C Chair Philip Johnson Mark Pavol Harris Sheinman Dennis Wessel Phillip Johnson William Artis Andrew Welch  <b><u>Liaisons / Staff / Ex-Officio Members:</u></b> Christian Gowrey  <b><u>Guests:</u></b> Bryan Latshaw Carol Lomonaw Steven Vehige Scott Peach
Alonzo Blalock Vice-Chair	2017	Kelley Cramm	2018	
Steve Duda, Research/Honors and Awards Sub-C Chair	2016	Ken Gill	2016	
Charles Henck, Standards Sub-C Chair	2018	Steve Nicklas	2018	
Phil Trafton	2019	Rachel Romero	2019	
Doug Cochrane	2018	Lynn Werman	2018	
R.Lee Millies, Jr	2017			
John Molinar	2019			

**DISTRIBUTION**

**ALL MEMBERS OF TC/TG/TRG**

**TAC COMMITTEE CHAIR:** Thomas M Lawrence (NP)

**TAC SECTION HEAD:** Dr. Krishnan Gowri (NP)

**LIAISONS:**

Handbook: Nicolas Lemire (NP)

ALI/Professional Development Liaison: Cameron Labunski (NP)

Research: Jeff Gatlin (NP)

Staff Liaison /Technical Services: Michael Vaughn (NP)

Research Liaison: Jeff Gatlin (NP)

CTTC Liaison: Michael Heinrich (NP)

Standards Liaison: Niles Bidstrup (NP)

\*\* NP Not Present

NOTICE: These Draft Minutes have not been approved and are not the official, approved record until approved by this committee.  
January 2017



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**TC 9.01 Large Building Air-Conditioning Systems**  
*Meeting Minutes*

**Meeting Date: June 28, 2016**  
St Louis, Mo

**Call to Order**

Chair John Vucci called the meeting to order at 1:00 PM local time,

**Introduction of Members And Guests**

Self-introductions of members and guests were made around the room as the attendance roster was circulated. The Chair welcomed all members and visitors. A quorum was achieved.

Voting Members:	8 Present, 6 Absent, Quorum was achieved
Voting Non-Quorum Members:	1 Present 0 Absent
Corresponding Members:	9 Present
Society Liaisons:	1 Present
Staff Liaisons:	0 Present
Guests:	4 Present

*Note: Voting Non-Quorum members are voting members if present, but do not count against quorum if absent.)*

**Minutes from Orlando**

- The Orlando meeting minutes were reviewed and approved - Motion Cochran/Molinar – Passed 8/0/0 CV motion passed
- John Vucci reviewed the agenda for the meeting was reviewed on a projection screen

**Agenda Comments / Updates (Vucci)**

No additions to the agenda were requested.

**Chair’s Comments and Section 9 Report (Vucci)**

- John Vucci reviewed the tracks for the upcoming conferences in Las Vegas and Long Beach. See attached.
  - i. ASHRAE would like to have more panel discussions as a new venue for presentations. They are going to start this new offering at the Long Beach session.
- Remote participation kits are available for TCs that would like to include members who need to dial in remotely. (There are eight kits available now for TCs to use.)
- 2 new MTGs have been formed since the last conference. IAQ and Occupant behavior



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**ASHRAE Liaison Reports**

- Section 9 Head (Gowrey) – Christian Gowrey gave a short introduction and update to the TC.
- The ASHRAE Handbook liaison was at the handbook subcommittee meeting.

**TC 9.01 Subcommittee Reports:**

**Program Subcommittee (Kuempel):**

- For the Las Vegas Meetings:
  - Steve Duda proposed the TC sponsor a seminar of the best of the Engineers Notebook Articles from the ASHRAE Journal
    - The speakers would be Taylor, Duda, Hall, Peterson
  - John Kuempel proposed a seminar on the 2<sup>nd</sup> printing of guideline 22 for chiller plant performance – building ops and performance track
  - The committee voted to approve the above programs. Motion Henk/Trafton – Passed 8/0/CV
- For the Long Beach meetings
  - TC 9.8 (Lg Bldg AC Applications) is asking TC 9.01 to cosponsor a seminar AC vs WC cooling for potable water.
  - The subcommittee is also recommending that we resubmit the seminar on AHRI standard 1350 that was previously not selected.

**Handbook Subcommittee (McKew / Sheinman):**

- Harris Sheinman presented to the TC on behalf of Howard McKew (See attachment)
- Harris reviewed the page views for the online version of the handbook. Roughly 97,000 online versions of the handbooks were. TC 9.01 owns 5 chapters out of a couple hundred chapters that make up all four handbooks. The chapters from TC 9.01 are among the most viewed in the entire group.
- TC 9.01 also lead among the degree that the chapters that are changed each time. Chapter 3 of 63 was the 4<sup>th</sup> most updated chapter of the applications manual. All five of the chapters were leaders in the most changed chapter category.
- We are at the beginning of the editorial cycle. We are looking for comments now. We need comments from outside the TC.
- Harris recommended that we not use the new ASHRAE tool because you need to be logged-in the tool for all changes. He recommended that we use BaseCamp or the old way of editing Word files. We can also have web meetings as needed.
- Harris confirmed the editors that had volunteered from the last meeting
 

Chapter 1 to 5 for completion publication 2019 – Reviewers Primary / Secondary	
Chapter 1 – HVAC Analysis & Selection	Howard McKew / Phil Trafton / Bill Artis
Chapter 2 – Decentralized Heating & Cooling	Charlie Henk / John Kuempel
Chapter 3 – Central Heating & Cooling Plants	Jay Eldridge / Dennis Wessel
Chapter 4 - Air Handling & Distribution	Steve Duda/ Doug Cochran
Chapter 5 – In Room Terminals	Phil Trafton / Co-written by another TC

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TC 6.3 or 8.11??

**Standards (Henck):**

- Kuempel - Guideline 22 met that morning. Phil Johnson is coming off of two other standards to join the committee. Standard 90.1 has a new addendum (bd?) that references chiller plant performance, and it references Guideline 22 as the proper method of test. Scope is complete. They will now include all chiller types and other fluids
- Standards 184 and 30 are moving towards publication.
- Standard 15 is working to include 2L refrigerants. The SSPC put together multiple addenda to address comments from public review. A2L and B2L refrigerants.
- 62.1 published a new edition
- 62.2 removed the low and high rise designation. All multifamily will be covered by std 62.2.
- Std. 110 published a new edition
- Standard 15 is making a residential version, Std 15.2, of the standard. They are working on the on title, purpose and scope.

**Research Subcommittee (Duda):** – Report attached

**Membership: No report**

**Honors and Awards(Duda):**

**Web Master (Eldridge):**

- New TC 9.1 Website developed (<https://tc0901.ashraetcs.org>) for all TC's by ASHRAE. The new web site was demonstrated.

**Notes from Chair's Breakfast (Vucci):**

- Deadlines for St Louis - Seminars Feb 8, uploads June 6
- CEC information is available at the CEC webpage

**Old Business:**

A discussion of RP 1448 for mechanical room ventilation. It is complete but there have not been any updates to the ventilation required by standard 15. The research is good, but there are some concerns with some cases that don't work as predicted.

**New Business**

- Phil Trafton spoke to the committee to say that he is interested in being the ASHRAE representative to the International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Mechanical Code (UMC) committee. To do this Phil needs to be first nominated by the TC.
- Motion: to nominate Phil Trafton to be the ASHRAE representative to the International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Mechanical Code (UMC) committee.

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- A Motion was made by Duda/Molinar, but there was not a quorum at that time.
- The TC will need to do a letter ballot to make this official.

### **TC/PC Liaison Reports**

- TC 4.03 – Ventilation & Filtration (S. Duda) RP-1747 – (phase 2 of RP 1547) CO2 based demand control ventilation in multi-zone systems. Three parts are being done by three different groups. How should a DDC control system properly control the OA damper to save energy when there is low occupancy and make sure there is enough air when there are zones with high occupancy? Std 62.1 is interested, but they do not address multi-zone systems in detail.
- SSPC-202 Commissioning Process for Building & Systems (Blalock) – Now the primary standard /committee for all commissioning documents.
- TC 5.1 – Fans (Eldridge) No major changes
- TC 5.06 – Control & Smoke (P Trafton) No Report
- TC 6.01 – Hydronic and Steam Heating Equipment and Systems (K. Cramm) No report
- TC 7.01 Integrated Building Design – T No Report
- TC 7.09 – Building Commissioning (Blalock) – Discussion on changes to commissioning provider from CxA. They are looking at a full track at the Long Beach meetings. DOE's working group is developing standards that will require certification and must meet a standard compliance. BCA is the first org to meet the compliance with the DOE certifications on Federal projects.
- TC 8.07 - Variable Refrigerant Flow (J. Vucci) – Worked on two topics 1) refrigerant leaks and their dispersion in a space, 2) guideline GPC 41 for VRF installations. Handbook chapter 18 is complete. The committee is in need of consulting engineer members.
- TC 9.06 – Healthcare (J. Traylor) No Report
- TC 9.08 – Large Building Applications (Kuempel) No Report
- TC 9.09 Mission Critical - Mark Pavol - Standard 90.4 vs 90.1 is very political and the definitions of a data center are different. 90.1's addendum CZ would make them the same, but it will not be complete. There will be overlap for a while. There is an IECC mtg in October that will try to lobby to use either one. TC 9.09 would rather be performance based under 90.4 than prescriptive based.
- TC 9.10 – Laboratory Systems (Harris) No report
- TC 9.12 – Tall Buildings (Wessel) – No report
- SSPC 15 Mechanical Refrigeration Safety (Vucci) – Std 15 - 2L refrigerants. Multiple addenda to address comments from public review. A2L and B2L refrigerants. They are trying very hard to be done by Fall for public review.
- SPC 188 Legionella in HVAC (Milles) – No report

For the Good and Well Being...

Adjournment at 3:30 PM



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**I. Attachments:**

- a) Handbook presentation
- b) TC 9.01 Honors & Award Report
- c) Research Report

**End of Minutes**

Respectfully submitted by:

Jay Eldridge, Secretary

## Proposed Seminar Program for 2017 ASHRAE Winter Conference in Las Vegas

**Title:** The Best of "Engineer's Notebook"

**Level:** Intermediate

**Track:** Fundamentals and Applications

**Session Length:** 90 minutes, 4 speakers

**Overall Session Abstract:** The "Engineer's Notebook" series in *ASHRAE Journal* was established in its current form in 2013, with four authors contributing monthly articles on a rotating basis. All four authors are ASHRAE Fellows and senior consulting engineers with more than 100 years of collective practical experience, and the concept of the recurring column is to share with peers what they have learned (sometimes the hard way) and experienced in the course of their careers, along with helpful design tips and tools. In this Seminar, each of the four has chosen their favorite column to date and has adapted it for presentation.

**TC Sponsors:** *will seek sponsorship from TC 9.01 and 4.03 at the upcoming St. Louis Conference*

**Session Chair:** *TBD (somebody from Taylor Engineering is proposed)*

**Estimated Attendance:** 150

**Scheduling Request:**

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### **SPEAKERS**

1. **Steven T. Taylor, PE, Fellow ASHRAE, Taylor Engineering LLC., Alameda, CA** **Title: "VAV Box Duct Design"** Abstract: VAV systems are the most common HVAC system for commercial buildings but duct design practices vary widely around the country. Duct design practices are seldom based on hard analysis of whether they are optimum from a life cycle cost perspective. This seminar compares various VAV box inlet and outlet duct design options including their impact on first costs and pressure drop. The presentation focuses on single duct VAV reheat systems, but most of the principles apply to other VAV system variations, such as dual duct and fan-powered box systems.
2. **Stephen W. Duda, PE, BEAP, HBDP, HFDP, Fellow ASHRAE, Ross & Baruzzini, Inc., St. Louis, MO** **Title: "Reverse Return Reexamined"** Abstract: There is a perception that a reverse-return hydronic piping configuration uses more piping and is therefore more expensive than its direct-return counterpart. While the cost disadvantage of reverse-return is true in some instances, this seminar presents a case that reverse-return doesn't always add piping length and system cost, depending on system configuration. Reverse-return is sometimes overlooked or dismissed out-of-hand when it offers tangible benefits and could easily have been implemented at no net cost to the project, so a goal of this seminar is to encourage pipe system designers to explore and consider reverse-return in further detail.

3. **Daniel H. Nall, PE, BEMP, HBDP, Life Member, Fellow ASHRAE, Syska Hennessy Group, New York, NY Title: "Waterside Economizers & Standard 90.1"** Abstract: ASHRAE 90.1-2013 specifies that "Water economizer systems shall be capable of cooling supply air by indirect evaporation and providing up to 100% of the expected system cooling load at outdoor air temperatures of 50°F dry bulb/45°F wet bulb and below." Many engineers size the components involved in the economizer, cooling tower, cooling coils and ductwork or piping serving constant load spaces solely for their primary function without considering how these components affect the ability to meet the above requirement. This presentation will discuss whether the above requirement can be met and what are the implications for selection of the components.
  4. **Kent Peterson PE, BEAP, Fellow ASHRAE, P2S Engineering, Inc., Long Beach, CA Title: "Improving Central Chilled Water System Performance"** Abstract: Many large central chilled water systems depend on high chilled water temperature differential,  $\Delta T$ , to minimize pumping energy and optimize chilled water thermal storage capacity. Buildings directly connected to central chilled water distribution systems should be designed to minimize pumping energy and maximize return chilled water return temperature to the central plant. High  $\Delta T$  is achieved with proper coil and control valve selection, piping and pumping design and supply water control. This seminar presents ways to improve performance and avoid problems commonly encountered in large chilled water systems.
- 

#### LEARNING OBJECTIVES

1. Learn design techniques for VAV box inlet and outlet ductwork based on first cost and pressure drop impacts.
  2. Become familiar with reverse-return and how to apply it when appropriate, as well as understand its limitations and recognize applications where it is not beneficial.
  3. Learn how to select components affecting waterside economizer performance to respond to the ASHRAE 90.1-2013 requirements.
  4. Optimize large chilled water distribution system design and avoid common problems with these types of systems.
- 

#### Q&A

1. Which of the following are negative impacts of using flexible ductwork upstream of VAV boxes? (a) High pressure drop, (b) airflow sensor error, (c) damper noise breakout, (d) all of these. Answer: (d)
2. Which of the following are positive benefits of oversizing reheat coils for single duct VAV reheat boxes? (a) lower airflow pressure drop; (b) reduced coil pressure drop; (c) reduced discharge plenum pressure drop; (d) all of these. Answer: (d)
3. A reverse-return hydronic piping system is characterized by (a) having only one pipe that handles both supply and return water flow simultaneously; (b) the terminal nearest the supply source having



# TC-0901 ASHRAE Handbook Editorial Cycle: Systems Volume Chapters 1-5

June 28, 2016

Howie McKew, subcommittee chair  
Harris Sheinman, corresponding member

Harris' new ASHRAE E-Mail Address:  
[ashraetc0901hms@gmail.com](mailto:ashraetc0901hms@gmail.com)

Howie's E-Mail Address:  
[hmckew@bss-consultant.com](mailto:hmckew@bss-consultant.com)

# Today's session

- ▶ ASHRAE THANKS YOU
  - All 5 chapters are well-maintained
  - Page Views are Great!
- ▶ Timetable for the 2020 Volume's Editorial Cycle
- ▶ Near-Term Needs
  - Outreach to peers for reviews of the Chapters
  - Confirm commitments of revisers

# On-Line Page Views, 1

Page Title	Page Views	Unique	Avg. Time	Entrance	Bounce	% Exit
CHAPTER 1. RESIDENCES	1,531	1,017	0:01:25	37	10.81%	13.46%
CHAPTER 3. COMMERCIAL AND PUBLIC BUILDINGS	1,333	858	0:02:04	37	13.51%	14.78%
CHAPTER 48. NOISE AND VIBRATION CONTROL	1,173	682	0:02:41	40	27.50%	28.73%
CHAPTER 8. HEALTH CARE FACILITIES	1,081	663	0:02:40	27	59.26%	21.78%
CHAPTER 33. KITCHEN VENTILATION	1,013	684	0:02:44	24	45.83%	25.96%
CHAPTER 19. DATA CENTERS AND TELECOMMUNICATION FACILITIES	878	598	0:02:16	23	39.13%	22.17%
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CHAPTER 16. LABORATORIES	765	500	0:02:10	26	50.00%	24.97%
CHAPTER 57. ROOM AIR DISTRIBUTION	732	468	0:02:25	26	26.92%	19.13%
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# On-Line Page Views, 2

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2015A	CHAPTER 3. COMMERCIAL AND PUBLIC BUILDINGS	1,333	858	0:02:04	37	13.51%	14.78%
2015A	CHAPTER 48. NOISE AND VIBRATION CONTROL	1,173	682	0:02:41	40	27.50%	28.73%
2015A	CHAPTER 8. HEALTH CARE FACILITIES	1,081	663	0:02:40	27	59.26%	21.78%
2015A	CHAPTER 33. KITCHEN VENTILATION	1,013	684	0:02:44	24	45.83%	25.96%
2015A	CHAPTER 19. DATA CENTERS AND TELECOMMUNICATION FACILITIES	878	598	0:02:16	23	39.13%	22.17%
2015A	CHAPTER 50. SERVICE WATER HEATING	872	588	0:02:44	42	38.10%	37.39%
2015A	CHAPTER 7. EDUCATIONAL FACILITIES	837	484	0:01:42	16	31.25%	10.99%
2015A	CHAPTER 16. LABORATORIES	765	500	0:02:10	26	50.00%	24.97%
2015A	CHAPTER 57. ROOM AIR DISTRIBUTION	732	468	0:02:25	26	26.92%	19.13%
2015A	CHAPTER 2. RETAIL FACILITIES	721	464	0:01:42	18	38.89%	13.04%
2015A	CHAPTER 4. TALL BUILDINGS	698	455	0:02:07	21	28.57%	17.34%
2015A	CHAPTER 47. DESIGN AND APPLICATION OF CONTROLS	697	431	0:01:57	25	24.00%	18.36%
2015A	CHAPTER 14. INDUSTRIAL AIR CONDITIONING	677	465	0:01:43	17	35.29%	11.08%
2015A	CHAPTER 63. CODES AND STANDARDS	654	445	0:01:35	12	25.00%	13.76%
2015A	CHAPTER 37. OWNING AND OPERATING COSTS	646	414	0:01:55	10	20.00%	19.81%
2015A	CHAPTER 18. CLEAN SPACES	635	399	0:01:53	13	15.38%	18.43%
2015A	CHAPTER 5. PLACES OF ASSEMBLY	595	391	0:01:37	16	25.00%	21.51%
2015A	CHAPTER 6. HOTELS, MOTELS, AND DORMITORIES	575	379	0:01:21	10	10.00%	15.30%
2015A	CHAPTER 45. BUILDING AIR INTAKE AND EXHAUST DESIGN	567	333	0:01:22	10	30.00%	14.64%
2015A	CHAPTER 15. ENCLOSED VEHICULAR FACILITIES	554	376	0:02:31	15	26.67%	24.19%
		187	121	0:00:56	2	0.00%	4.28%
		178	111	0:00:53	3	0.00%	5.62%
		164	103	0:01:24	4	50.00%	3.66%

# The 2020 Volume's Editorial Cycle

## 2020 HVAC Systems and Equipment

		2016			2017			2018			2019			2020		
		Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	
Review	Current HB received (June 1)		June 1													
	TC selects HB subcom and chair				Feb 1											
	Review current HB for changes					Jul 1										
Revise	Decide extent of and outline revisions					Jul 1										
	Seek and appoint reviser(s)							Feb 1								
	Revise chapter(s)										Feb 1					
Approve	Send revised chapter to TC for review												Jul 31			
	TC approves chapter												Jul 31			
	Send chapter to HBC liaison												Jul 31			
Edit & Produce	HQ sends chpt. proof to TC contact														Mar 15	
	HB sent to printer (April 1)														Apr 1	
	HB mailed (May 15)														M 15	

# Near Term Needs – Handbook

- ✓ Select Handbook Subcommittee Chair
- ▶ Confirm Chapter Reviewers/Revisers – 1 to 3 per Chapter
  - Real commitment
  - Reviews from Outside TCs
  - MBO tracking and interim milestones will be developed
- ▶ Distribute Handbook Chapter Word Files
- ▶ Schedule Handbook Subcommittee Meetings off–Society–meeting cycle
- ▶ Use the Handbook Committee’s Chapter Review Checklist to inform the initial review of each Chapter
  - Is the Chapter relevant?
  - ID trends in the industry which may have impact on the Chapters

# Chapter Reviewers

Ch.1, HVAC Analysis & Selection: McKew / Trafton / Artis

Ch. 2, Decentralized Heat & Cool: Henk / Kuempel

Ch. 3, Central Heat & Cool: Eldridge / Wessel

Ch. 4: Air Handling: Duda / Cochran

Ch.5, In Room Terminals: TC-?? / Trafton

Some ideas for TCs to collaborate with:

TC6.3 Central Forced-Air Heating and Cooling Systems

TC8.11 Unitary and Room Air Conditioners and Heat Pumps

# Discussion





## TC 9.01 Research Subcommittee Report

2016 Annual Conference, St. Louis

Subcommittee Meeting: none conducted this conference

Attendees: n/a

### Notes from the TC Research Chairs' Breakfast -- Marriott Grand, Majestic Ballroom D/E Monday 6:30 to 8:00 am

- At this Conference, 9 RTARs reviewed (1 accepted, 4 accepted with conditions, 4 rejected); 10 WS reviewed (6 accepted with conditions, 4 returned).
- RAC is seeking more applied research rather than raw research, or inclusion of an applied research task at the end of a raw research project.
- Updates that will be posted by RAC on their website in August 2016: New URP ground-rules, new Grant-in-Aid procedures, PES/PMS training modules, and an updated Research Manual.
- Online Research Database is in progress, with 250 completed projects currently available for ASHRAE members to read, and more will be added.
- Major A2L Flammable Refrigerant Research Initiative is underway, with a budget of \$5.2 million funded by ASHRAE, AHRI, and USDOE. This is related to an effort to find low-GWP refrigerants as an alternative to high-GWP refrigerants currently used in packaged equipment, but which may be somewhat flammable.
- Jeff Gatlin is our Section 9 RAC Liaison – [rl9@ashrae.net](mailto:rl9@ashrae.net).
- RAC deadlines each year for WS and RTARs: May 15, August 15, December 15.

### Completed Research

- RP-1448 *Ventilation Requirements for Refrigeration Machinery Rooms*. Research is complete. Once analysis is completed it will be incorporated into Standard 15. However, some contradictory results were presented at the SSPC-15 meeting in Atlanta (2015) suggesting that the RP-1448 assumptions are faulty and results are insufficiently conservative.
- **ACTION ITEM:** S.Duda will follow up with Steve Taylor, the PMS for RP-1448 to review.

### Contracted Research Projects in Progress

- None at this time.

### Research Projects in Bidding Phase

- None at this time.

### Research Projects in Work Statement Phase

- WS-1684 *Dispersion of Refrigerant Releases to Connecting Spaces via Transfer Openings*. TC 9.01 is the lead sponsor for the research. A completed Work Statement was submitted for review in



Chicago at the 2015 Winter Conference, and was defeated by SSPC 15. SSPC 15 prefers the development of a software tool or similar, in lieu of a traditional report.

- Coincidentally, there is private industry-funded research underway studying very nearly the same topics as WS-1684. So the re-draft of WS-1684 may include independent third-party peer review, verification, and some corroborating research in lieu of the full-blown original research idea.
- **ACTION ITEM:** S.Duda / J.Molnar will modify and re-draft the 1684 Work Statement, distribute, and issue for comments.
- WS-1727 *Interaction and Energy Cross-Impact of Building HVAC with Ice-Rink Refrigeration Systems In Indoor Ice Arenas*. TC 9.01 is co-sponsor; TC 10.02 is primary sponsor. Lead authors are Greg Scrivener and Wayne Borrowman from TC 10.02, who provided this status update: “We had a very good discussion regarding RTAR-1727 in TC 10.02 today. We are going to try to get a work statement finished for the December RAC deadline.”

#### Old Business

- None.

#### New Business

- Walt Grodznik suggested the following research idea: The *Air Conditioning System Design Manual* 2<sup>nd</sup> edition is 8-10 years old. He suggests a research project to edit and review. **ACTION ITEM:** S.Duda will pursue and follow up. One inquiry is whether or not the design manual listed above is the basis of an ALI class, and if so, perhaps the PDC needs to get involved in this.
- It was suggested during the full TC 9.01 meeting that gas-fired dessicant recovery should be part of WS-1727 (discussed above). **ACTION ITEM:** S.Duda will contact TC 10.02 to inquire about this of WS-1727.

#### Next Meeting

- Next TC 9.01 Research Subcommittee Meeting will be at Noon PST on January 31, 2017 in Las Vegas at the ASHRAE 2017 Winter Conference.

Respectfully submitted by:

A handwritten signature in blue ink that reads "Stephen W. Duda".

Stephen W. Duda, PE

TC 9.01 Research Subcommittee Chair

July 12, 2016



## TC 9.01 Honors & Awards Report

### 2016 Annual Meeting, St. Louis

#### George B. Hightower Award:

- *Recognizes excellence in volunteer service in the area of Technical Committee, Technical Group, and Technical Research Group activities, excluding Research & Standards (which have separate awards).*
- Past winners from TC 9.01: Stephen Duda (2015); Howard McKew (2008).
- **ACTION ITEM:** Nominations for the next award cycle are due September 1 each year. Desirable qualities include include Seminar and Conference Paper programs, Handbook & Program subcommittee work including officer positions, and service as TC officer.

#### Service to ASHRAE Research Award:

- *Recognizes excellence in volunteer service in the area of Society research. Desirable qualities include authorship of RTARs and Work Statements, participation or chairing of multiple PMS and PES, and Research subcommittee work including Research Subcommittee Chair. This award is for a volunteer in support of Research, not a paid researcher and not a donor to ASHRAE Research.*
- TC 9.01 did not have a nominee last year.
- **ACTION ITEM:** Nominations are due September 1 each year. Please help me identify a qualified candidate.

#### ASHRAE Fellow:

- *Recognizes distinction in the arts relating to the sciences of heating, refrigeration, air conditioning or ventilation, or the allied arts and sciences, or in the teaching of major courses in said arts and sciences, or who by reason of invention, research, teaching, design, original work, or as an engineering executive on projects of unusual or important scope, has made substantial contribution to said arts and sciences, and has been in good standing as a full grade Member for at least ten (10) years is eligible for election to the grade of Fellow.*
- **On behalf of TC 9.01, I formally nominated one of our TC 9.01 Members for this honor this year, and that nomination is pending.** If selected, the award is presented at the Plenary of the 2017 Winter Conference in Las Vegas.
- **ACTION ITEM:** New nominations are due December 1 of each year. Please help me identify suitable candidates from this TC, including yourself if you feel you are eligible. I have one candidate from TC 9.01 in mind and will work to submit by December 1. I may request the required letters of support from some in TC 9.01.

#### Distinguished Service Award:

- *Recognizes members who have served ASHRAE faithfully as a member of committees or otherwise giving freely of his/her time and talent on behalf of the Society. Lifetime cumulative points-based system with a minimum of 15 points required.*
- Recipient from TC 9.01 this year: **Congratulations to Harris Sheinman!** He received his award at the Saturday Plenary of this Conference.



- The points tally sheet is available on the ASHRAE website or directly from me.
- New nominations are due May 1 of each year. Self-nominations are permitted. Please help me identify additional suitable candidates from this TC, including yourself if you feel you are eligible and have not yet received this award. There is no quantity limit for nominees nor honorees.

Exceptional Service Award:

- *Recognizes members who have served the Society faithfully and with exemplary effort, far in excess of that required for the Distinguished Service Award.* Lifetime cumulative points-based system with a minimum of 45 points required.
- The points tally sheet is available on the ASHRAE website or directly from me.
- Recipient from TC 9.01 this year: **Congratulations to Dennis Wessel!** He received his award at the Saturday Plenary of this Conference. Dennis's contributions to ASHRAE add to a total of 58 points, versus the 45 points required for the ESA, with nine (9) years on Handbook, seven (7) years on CEC/Programs, three (3) years as RVC, three (3) years on PubEd Council, and most recently, a three (3) year term on our Board of Directors. He has been an active participant on one or more TCs continuously since 1985.
- New nominations are due May 1 of each year. Self-nominations are permitted. Please help me identify additional suitable candidates from this TC, including yourself if you feel you are eligible and have not yet received this award.

Other Awards on my Radar: Send any suggested nominations for the following to Steve Duda.

- Standards Achievement Award. *Recognizes excellence in volunteer service for developing ASHRAE Standards and/or Guidelines.*
- Andrew T. Boggs Service Award. *Recognizes a past Exceptional Service Awardee for continued, unselfish, dedicated and distinguished service to the Society.*
- Louise & Bill Holladay Distinguished Fellow Award. *Recognizes a Fellow of the Society who continues preeminence in engineering or research.*
- F. Paul Anderson Award. *Honors a member for notable achievement, outstanding work or service in any field of the Society. This is ASHRAE's highest honor.*

Respectfully submitted by:

A handwritten signature in blue ink that reads "Stephen W. Duda".

Stephen W. Duda, PE  
TC 9.01 Honors & Awards Chair  
Revised July 12, 2016