



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

**Technical Committee 3.2 – System Chemistry**

**DRAFT v4** Agenda Winter Conference 2018

Chicago

Monday January 22<sup>th</sup>, 2018 – 2:15 to 4:15 pm

Palmer House – Clark 5

<b>Name</b>	<b>Affiliation</b>
<b>Voting Members</b>	
Warren Clough – <b>Chair</b>	Carrier
Ed Hessell - <b>Vice Chair</b>	Lanxess
Rob Yost - <b>Standards</b>	National Refrigerants
Joe Karnaz- <b>Secretary</b>	Shrieve Chemical
Greg Smith- <b>Handbook</b>	Honeywell
Dave Vincent- <b>Webmaster</b>	National Refrigerants
Tom Leck- <b>MTG Liaison</b>	TJLeck Consulting Services
Sonny Sundaresan	BVA Inc
Steve Baker	Emerson
Danny Halel	ACCA
Sarah Kim	Arkema
Steve Kujak	Ingersoll Rand
Chris Reeves	Sporlan Division of Parker Hannifin
John Senediak	Intertek
<b>Non-Voting Members</b>	
Brad Boggess- <b>Programs</b>	Emerson Climate Technologies, Inc.
Mark Baker- <b>Research</b>	CPI Fluid Engineering
Scott Gustafson- <b>ALI Coordinator</b>	Shrieve Chemical

- 1.) Call To Order (**Warren Clough**)
  - Introduction of Members and Guests
- 2.) ASHRAE Code of Conduct - <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>
- 3.) Confirmation of Quorum (**Warren Clough/Joe Karnaz**)
- 4.) Approval of Agenda (**Warren Clough**)
- 5.) Approval of 2017 Long Beach Annual Meeting Minutes (**Warren Clough**)
- 6.) Report of TC Chair’s Breakfast (**Warren Clough**)
  - This meeting provides the Section 3 Chairs’ a forum for distribution of current direction and guidelines for any requirements related to ASHRAE activities including technical and research direction, standards, publications, etc.

- 5.) Liaison Comments (may be adjusted to accommodate the Liaison's schedule)
- Jay Kohler (Section Head)
  - Steve Kujak (Research)
  - Don Fenton (Handbook)
- 6.) Subcommittee Reports

**Program (Brad Boggess)**

**Review of Chicago Schedule: Sponsored, Co-sponsored or programs of interest**

AHR EXPO Section 3 Refrigerant Mini Track (1/22/18)

**Lubricant Changes for Low GWP Next Generation Equipment**

Session 2, Room S101B: 11 am to Noon

Sponsor 3.4, Co-Sponsor Low GWP MTG

- Lubrication Considerations for Lower GWP R-410A Alternatives – Julie Majurin, CPI Fluid Engineering
- Understanding Lubricant Requirements for Next Generation Low Global Warming Refrigerants – Ed Hessell & Roberto Urrego, Lanxess Corporation
- Lubricant Changes for Low GWP Next Generation Equipment – Joe Karnaz, Shrieve Chemical

**Some Low GWP Next Generation Refrigerant will be Flammable: What does it mean to be Flammable?**

Session 4, Room S101B: 1:00 pm to 2:30 pm

Sponsor TC 3.1, Co-Sponsor Low GWP MTG

- Flammable Refrigerant Basics – Stephen Kujak, Trane, Ingersoll Rand
- Flammability: A Continuum Vs. Discrete Boundary – Gregory Linteris, National Institute of Standards and Technology
- AHRI Flammable Refrigerant Research – Xudung Wang, AHRI
- Developing Guidelines for Flammable Refrigerant Use – William Goetzler & Matt Guernsey, Navigant

**Next Generation of Lower or Low GWP Next Generation HVAC&R Equipment**

Session 6, Room S101B: 2:45PM to 3:45PM

Sponsor TC 3.1, Co-Sponsor TC 8.2

- Low GWP Refrigerant Alternatives for Chillers – Barbara Minor, Chemours
- Low GWP Systems for Commercial Refrigeration – K.C. Kolstad, Target
- Key Learning from Conversions of Commercial Refrigeration Systems to Low GWP Alternatives – Charles Allgood, Chemours

**Contaminant Control: What is the Same and What is New When Using Low GWP refrigerants?**

Session 8, Room S101B: 4:00pm to 5:00pm

Sponsor TC3.3, Co-Sponsor Low GWP MTG

- Chemistry Considerations and Contaminant Control for Low GWP Refrigerants – Joe Karnaz, Shrieve Chemical
- Impact of Contamination on the Stability of Low GWP Refrigerants – Sarah Kim, Arkema
- Effect of Contaminants on the Stability of HFO Refrigerant Systems – Ngoc Dung (Rosine) Rohatgi, Spauschus Associates

### **Discussion of Future Programs:**

- Houston, June 23-27, 2018  
RP1774 (Effects of System Chemicals Towards the Breakdown of Lubricants and Lower GWP Refrigerants)
- Atlanta, Jan 12-16, 2019
- Kansas City, June 22-26, 2019
- ASHRAE 125 Celebration (Joe Karnaz)- TC 3.1/TC3.2/TC 3.3/TC3.4 collaboration

### **Handbook (Greg Smith)**

- Committee members: Greg Smith (chair); Rosine Rohatgi; Brad Boggess; Ed Hessell; Warren Clough with Elyse Sorensen as a reviewer.
- Status of publication

### **Standards (Rob Yost)**

#### **Update:**

- GPC 38P (Former Standard 175 ): “Metal Pressure Vessel Testing to Test Materials Used with Refrigeration Systems” – Update from Committee Chair Joe Karnaz
- Standard 97 - 2007 “Sealed Glass Tube Method to Test Chemical Stability of Materials for Use Within Refrigerant Systems” – Update from Committee Chair Chris Seeton
- New proposed guideline- “Method of testing the Compatibility of Materials with Refrigerant and Lubricant.” Refine the TPS and bring back to the committee for vote.

### **Research (Mark Baker)**

#### **Update:**

- WS 1774 – “Effects of System Chemicals Towards the Breakdown of Lubricants and Lower GWP Refrigerants “ (Julie Majurin)
- RTAR 1790 – “Distribution of Water between Vapor and Liquid Phases of Low GWP Refrigerants “ (Brad Boggess)
- RTAR – Chemical stability of new R410A with lubricant. (Lead?)
- RTAR- Compatibility of rubber hoses with HFO refrigerants (Chris Seeton)
- Update from Sunday research subcommittee meeting.
- Future Research needs- Ad Hoc Committee to lay out roadmap of future research needs
- New Ideas

### **Webmaster (Dave Vincent)**

#### **Status Update**

### **7.) Membership (Warren Clough/Joe Karnaz)**

#### **Update:**

- Voting Members (14): Ed Hessell; Steve Kujak; Sonny Sundaresan; Tom Leck; Greg Smith; Chris Reeves; Joe Karnaz; Warren Clough; John Senediak; Rob Yost; Dave Vincent; Steve Baker; Danny Halel; Sara Kim
- Committee Members:  
Chair – Warren Clough  
Vice Chair – Ed Hessell  
Secretary – Joe Karnaz  
Handbook- Greg Smith  
Programs – Brad Boggess  
Standards – Rob Yost  
Research – Mark Baker

Webmaster – Dave Vincent  
ALI – Scott Gustafson  
MTG Low GWP – Tom Leck

- Rollover Roster: Anyone interested in becoming a corresponding member please go to the ASHRAE website and join as a Provisional Member:  
<https://www.ashrae.org/standards-research--technology/technical-committees/applying-for-membership-on-a-technical-committee-2015>

8.) MTG Lower GWP Refrigerants (**Tom Leck**)

**Update:** Recent activity

9.) Old Business (**Warren Clough**)

10.) New Business (**Warren Clough**)

11.) Adjourn