



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

Technical Committee 3.2 – Refrigerant System Chemistry

Final Approved Agenda Winter Conference 2018

Chicago

Monday January 22th, 2018 – 2:15 to 4:15 pm

Palmer House – Clark 5

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