

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS,
INC.**

**1791 Tullie Circle, N.E./Atlanta, GA 30329
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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 3.4 DATE May 21, 2012

TC/TG/TRG TITLE Lubrication

DATE OF MEETING January 24, 2012 LOCATION Chicago, IL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Joe Nigro	2010	Liz Dixon (IM)	2009	Attendance List Attached
Ed Hessell	2010	Kirsten Ahrenstorf	2009	
Danny Halel	2008			
David J Vincent	2009			
Curt Slayton	2009			
Rob Yost	2008			
Liwen Wei	2009			
Raymond Thomas	2007			

DISTRIBUTION

All Members of TC/TG/TRG plus the following:

TAC Section Head:	<u>William Murphy</u>
TAC Chair: TAC Vice-Chair:	<u>Charles Culp</u>
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Ray Cohen – RAC Ramon Ponce – Handbook Douglas Abramson – Standards John A Clark – Special Pubs Randy Schrecengost – Program Jennifer Leach – CTTC
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn

Note: "These draft minutes have not been approved and are not the official, approved record until approved by this committee."

January 24, 2012

Call to Order – Joe Nigro

Joe called the meeting of TC 3.4 to order at 1:30 pm in the Wabash Room of the Palmer house Hotel in Chicago IL. Members and guests introduced themselves. A list of attendees is included at the end of these minutes.

Confirmation of Quorum – Joe Nigro / David Schluckebier

Voting members Joe Nigro, Rob Yost, Ed Hessel, Dave Vincent, Danny Halel, Curt Slayton, Raymond Thomas, and Liwen Wei were present. With eight of 10 voting members present a quorum was confirmed.

Approval of 2011 Summer Meeting Minutes (Montreal) – Joe Nigro

A motion was made to approve the Montreal TC 3.4 committee minutes as written. A correction to the research section was discussed. The motion to approve was seconded and carried with the proviso that the amended minutes be posted on the TC 3.4 website.

Report of TC Chairs Breakfast – Joe Nigro

- ASHRAE has a new logo and branding. All websites need to update with logo by March 1st.
- Hightower award given to Don Beaty from TC 9.9 – congratulations Don!
- YEA is promoting young ASHRAE had mixer on Sunday
- Roster is moving from paper system to online system.
- ASHRAE members should not speak to outside organizations or bodies for ASHRAE without written permission from ASHRAE.
- There is room for more seminars for San Antonia, due Feb 13th
- Bill Murphy wanted to notify everyone that there are new courses this summer at the Purdue Conference
- Effective for Dallas ASHRAE speakers will have to pay 25% of conference fee
- Rollover roster updates are due after this meeting.
- The official ASHRAE TC Chair Notes will be posted on the TC 3.4 website.

Liaison Comments – Joe Nigro

Section Head - Bill Murphy

Bill provided a brief update on the ASHRAE branding initiative etal.

Handbook – Ramon Ponce

Ramon discussed the status of the 2014 Refrigeration Handbook and the TC 3.4 update of chapter 12.

Program – Ed Hessel

No programs were scheduled for Chicago.

Ed discussed the need for more TC 3.4 members to volunteer to participate in future programs.

At this time, no programs scheduled for San Antonio. Ed will try to submit the following for Dallas before the July 15th deadline:

– Improved Lubricants for Low GWP Refrigerants (Part II)

Date Inception	Title	Lead	Potential Speakers	Meeting	Status/Action Items	Comments
2/1/2011	New and Improved Lubricants to Accommodate Low GWP Refrigerants	Ed Hessel and Scott Gustafson	Chris Seeton, Ted Li, Joe Karnaz, Ed Hessel	Montreal	Seminar 51, Wed. 6/29. 8-9:30am, Westmount	Complete
6/26/2010	Managing Oil Circulation in Refrigeration and Air-Conditioning Systems for Comfortable Daily Lives	Ed Hessel	Danny Halel (Hussman) Scott Wujek (Creative Thermal Solutions) Yunho Hwang (U. of Maryland)	San Antonio	Completed online submission by Feb. 13, 2012 Rejection Notice on March 16, 2012.	
2/1/2011	Lubricants for LGWP refrigerants II	Ed Hessel	Potential list of speakers includes: Chris Seeton (Honeywell), Ken Lilje (CPI), Ed Hessel (Chemtura) Scott Gustafson (Schrieve), Eric Schweim (Idemitsu)	Dallas	Finalize list of 3-4 speakers at San Antonio Meeting. Finalize action items required for submission.	Talk to Chris, Ken, Scott and Eric before meeting San Antonio
2/1/2011	Lubrication Aspects of LGWP applications	Sonny Sundareson	To be determined	?	On hold. Sonny targeting Dallas in conjunction with AHRI meeting Jan 2013	
2/1/2011	Improvement of Equipment in Terms of EBR	Joe Karnaz	To be determined	Dallas	Joe to update on potential speakers at San Antonio.	Speak to Joe about potential speakers
2/1/2011	Lubricants with CO2	Sonny Sundareson	To be determined	?	On hold until Sonny can identify some OEM speakers	Section 3.2 has one speaker for a Seminar on Fundamentals of R-744 Refrigeration Systems
2/1/2011	Effects of Refrigerant Lubricant Solubility on Microchannel Heat Exchangers	Cosponsor with 8.4	8.4 to provide 2 speakers, 3.4 must provide 1.	?	Need to identify lead and one speaker	

Handbook – Julie Majurin

Revision of Chapter 12 needs to be completed by June 2013 (draft). Hand Book Sub-Committee Members: Julie Majurin (Chair), Chris Seeton, Marc Scancarello, Amy Shifflett

Jay Field pointed out that chapter 12 was reviewed and stated as “written from a CFC perspective, needs to be done with an HFC perspective as well as include PVE’s”. The suggestion will be incorporated in the chapter revision.

Standards – Rob Yost

- Standard 86 “Method of Testing the Floc point of Refrigeration Grade Oils” – Update. Warren commented at the meeting, the group worked through the whole standard and made minor corrections. The group needs to do an editorial change to the scope of the standard, and will submit the proposed change to SPLS. Members: Warren Clough (Chair), Corey Anderson, Brad Boggess, Rick Hall, Rosine Rohatgi.
- Standard 99 “Refrigeration Oil Description” – Update. Chris stated there was in introduction meeting, John is going to kick off the balance (I don’t know what this means - it may be that John Senediak throws off the balance of the committee, or John was added to the SPC to achieve balance). Members: Chris Seeton (Chair), Ken Lilje, Ed Hessel, Rick Hall, John Senediak
- Standard 172P “Method of Test for Insoluble Materials in Synthetic Lubricants and HFC Refrigerant Systems” – Update. Liwen had meeting on Monday morning, they do not have the new data and samples were lost during round robin testing. Will do another round of round robin testing. Managed to identify some additives but samples were lost. The group decided to use GMO as the material for the new round robin testing. Members: Liwen Wei (Chair), Rob Yost, Joe Karnaz, Alice Riemer, Rosine Rohatgi, John Senediak

Research - Chris Seeton

Note: Combined TC 3.2, 3.3, 3.4 Research Subcommittee Meeting – Sunday January 22nd, 4:00-6:00 pm, Palmer House Montrose 3

- RTARs
 - Update RTAR 1628 – “Physical Property Measurements of HFO/Lubricant Mixtures”
Chris stated this has passed RTAR stage. Vote will be taken at the San Antonio Meeting to establish a work statement.
- Proposed RTAR’s
 - Joe Karnaz/Steve Kujak– New RTAR “physical property measurements of R32 / HFO 1234yf and R32 / HFO 1234ze”
 - Does TC3.4 have a need for an RTAR to - Look at ultra-high pressure viscosity measurements?
- Update from Research Subcommittee meeting and other ideas
 - From TC3.2 – committee voted to write RTAR on contamination with R-40 systems. A motion was made and seconded for TC 3.4 to co-sponsor TC 3.2 on an RTAR to explore R-40 contamination issues. The vote in favor was unanimous. Warren Clough will write a draft RTAR to look at stability with R-40 system materials focusing on interactions with lubricants and aluminum parts in the system.

Research chairs breakfast summary:

- At TC breakfast it was discussed there are opportunities to spend 10 million over 5 yrs.
- For ASHRAE 10 projects went out for bid, 5 were approved
- Implementation plan consists of 53 RTARS at various stages. There are 6 active RTARS and 2 of them we have.
- They are projecting to run out of RTARS in 2013
- RTARS need to be submitted by February 13th.

Webmaster - Dave Vincent

The website is up to date and the ASHRAE logo has been changed

Membership – Joe Nigro

Joe Nigro, Rob Yost, Liwen Wei and Danny Halel will roll off as voting members after the summer meeting. This group will be replaced by Joe Karnaz, Keith Van Horn, Yunho Hwang. Scott Gustafson will assume the Chairmanship and become a voting member.

Old business – Joe Nigro

No old business was introduced.

New business – Joe Nigro

No new business was introduced.

Adjourn – Joe Nigro

A motion was made and seconded to adjourn TC 3.4. With no further business before the committee, Joe Nigro adjourned the meeting.

Name	Company Affiliation	Status
Joseph L Nigro	CPI Engineering	VM Chair
Scott Gustafson	Shrieve	CM Vice Chair
Chris Seeton	Honeywell	CM Research
Rob Yost	National Refrigerants	VM Standards
Ed Hessel	Hatco Div of Chemtura	VM Program
Julie Majunn	Trane	CM Handbook
Dave Vincent	BVA	VM Webmaster
Danny Halel	Hussmann	VM
Curt Slayton	Consulting Services Intl	VM
Raymond Thomas	Honeywell	VM
Joe Karnaz	CPI Engineering	CM
Liwen Wei	Consultant	VM
Dale Carr	Hatco Div, Chemtura	CM
Richard Kelly	Hatco Div, Chemtura	CM
Roberto Urrego	Hatco Div, Chemtura	CM
Brett Van Horn	Arkema	CM
Jay Field	Trane	CM
Hewitt Gaudin	Mexichem	CM
Rasmus Poulsen	Danfoss	CM
Ardi Yatim	OK State U	Guest
Ramon Pons		Guest
Patik Deokar	OK State U	Guest
Chris Reeves	Parker	CM
Tony Korba	Parker	CM
Ted Li	Shrieve	CM
John Senediak	Intertek	Guest
Yunko Hwang	UMD	CM
Dan Wright	NRP	Guest
John Hughes	Mueller	Guest
Erik Anderson	Andeng	Guest
Warren Clough	Carrier	CM
Knot Petry	Carrier	Guest
Adrienne Diebold	EXMO	CM
David Blain	EXMO	Guest
Stephen Spletzer	Arkema	CM
Russ Noel	Dow Cor	Guest
Yanwei Cen	Rector Seal	Guest
Scott Wujek	Thermal Solutions	CM
Chad Bowers	Thermal Solutions	CM
Alan Cohen	UOP	CM
Ken Lilje	CPI Engineering	CM
Alice Reimer	Danfoss	CM
Rosine Rohatgi	Spauschus Associates	CM
Marc Sancarello	Emerson Climate Tech	Guest
Brad Boggess	Emerson Climate Tech	Guest
Steve Kujak	Trane	Guest
Hermann Renz	Bitzer	Guest
Amy Shiflett	CPI Engineering	Guest
Enrique Villavicencio	Acemire	Guest

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