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DRAFT

TC/TG/MTG/TRG MINUTES COVER SHEET

(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/MTG/TRG No. 3.4 DATE January 30, 2018

TC/TG/MTG/TRG TITLE Lubrication

DATE OF MEETING January 23, 2018 LOCATION Chicago, IL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Chris Seeton	2018	Steve Spletzer	2020	
Roberto Urrego	2019	Danny Halel	2021	
Sarah Kim	2021			
Rob Yost	2018			
Dave Vincent	2018			
Joe Nigro	2020			
John Senediak	2020			
Julie Majurin	2018			
Sonny Sundaresan	2018			
Rosine Rohatgi	2021			
Greg Smith	2020			

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

TAC Section Head: Jay Kohler	SH3@ashrae.net
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	Steve Kujak – Research Don Fenton - Standards
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

Note: These draft minutes have not been approved and not the official, approved record until approved by the TC.

Minutes – TC 3.4 Lubrication

Call to Order – Chris Seeton

Chris Seeton called TC 3.4 meeting to order at 1:30 pm on January 23, 2018 in Chicago Clark 5 7th Floor. Members and guests introduced themselves. Guests were welcomed and invited to participate. A sign-up sheet was circulated. The Chair reviewed the ASHRAE Ethics Statement.

A quorum at the time of the start of the meeting was established with 9 of 13 members present.

A quick review of the agenda was made.

Approval of 2018 Winter Meeting Agenda and 2017 Long Beach Meeting Minutes– Chris Seeton

A motion was made by Roberto Urrego to approve the agenda for today's meeting in Chicago, the motioned was seconded by Joe Nigro, the motion carried 8-0-0-5(CNV).

A motion was made by Rob Yost to approve the Long Beach minutes as written, the motioned was seconded by Rosine Rohatgi, the motion carried 8-0-0-5(CNV).

A review of the roster was made in order to complete the rollover roster submission. New management team effective July 1, 2018.

Scott Wujek – Chair
Greg Smith – Vice Chair
Joe Karnaz – Secretary
Greg Smith – Research
Joe Nigro – Program
Casey Scruggs - Handbook
Sheli Porter – Standards
Dave Vincent – Webmaster

Steve Kujak – New Voting

The chair showed prospective TC members how to go on-line to join the committee.

TC Chair Breakfast – Chris Seeton

- The Hightower Award receipt was announced and was Art Hallstrom from TC 1.6.
- It is important for TC to nominate and recognize committee members that deserve these honors.
- A new TC website template is being rolled out and webmaster should be made aware.
- Member email information can be downloaded from the TC roster posted on the website.

- Additional TC email aliases can be used to address committee positions which eliminates the need to direct correspondence to an individual.
- The deadline for submission for Houston programs is February 9, 2018.
- Training for various ASHRAE positions is available on-line.
- CEC is asking for volunteers for paper reviews.

Liaisons

Jay Kohler – TAC Section 3 Head – Introduced himself to the committee and what his role is. Mentioned that improvements seem to have been made over the last few meetings on reducing some of the past issues section 3 has had with getting programs approved. Moving forward each winter meeting will have a refrigeration track. Jay reviewed the roster process moving from provisional member to corresponding member to voting member.

Steve Kujak – RAC Liaison – Steve mentioned that RAC meets on Friday, Saturday and Wednesday of ASHRAE meetings and are going to expand submission review of RTAR and work statements to March, May, August and September. RAC gave money back to the general fund that was earmarked for last year and with return of investments going well there is money available. Currently 11 projects are going out for the bid stage. Steve encouraged individuals to join RAC and thought that we should have a succession plan for having a section 3 represented on RAC when his term is up.

Subcommittee Reports

Research – Greg Smith

Update was provided from Research Chair meeting: Brian Silvitti from TC 6.7 was presented with research service award. New PES/PMS training material is available on the website. Need to have full votes and co-sponsor representation during voting on initial project development.

RTAR 1728 was submitted “Development of a Model for the Prediction of Oil/Refrigerant Mixture Properties of Low GWP Refrigerants and Synthetic Oils”. Steve Kujak and Ken Schultz have taken over drafting a work statement. They have until May 15th 2018 to submit but will try to target March 2018 as a deadline.

“Physical Property Measurements of HFO/Lubricant Mixtures” based on an old RTAR submission RTAR 1628 is being rewritten as a work statement for submission This work will help support RTAR 1728. This is currently a work in progress and will try to be finished by March 2018.

Work Statement 1721 – Oil Return and Retention in Unitary Split Systems Gas Lines with HFC and HFO refrigerants. This is sponsored by TC 8.11 and cosponsored by TC 3.4. The principal investigator is Purdue University and the project has been delayed 6-12 months and results are expected 2020.

A RTAR has been proposed named “Foaming Properties of Low GWP Refrigerant and Oil Mixtures”. Ivan Rydkin submitted a revision to this work statement that was distributed to the TC voting members prior to the meeting. Changes were made to the work statement to address the need for specific lubricants and implementing a stage in the process of Go-No Go. Committee vote is needed along with a vote from TC 8.1 which is also a sponsor.

A motion was made by Sonny Sundaresan to approve the updated work statement and the motioned was seconded by Dave Vincent, the motion carried 8-0-0-5(CNV).

RP1774 “Effects of System Chemicals Towards the Breakdown of Lubricants and Lower GWP Refrigerants” is cosponsored by TC 3.4. The contractor is Spauschus and a final draft report was given to the PMS of TC 3.2 which is the sponsor. The PMS received the document only a few days ago so will need some time to review.

Effect of Lubricant and Refrigerant Mixtures on Microchannel Heat Exchanger Performance is a co-sponsor research project. Scott Wujek gave an update and said this is now designated as 1785 RP. The principle investigator is Oklahoma State University. They are currently selecting and identifying the appropriate coils to move the project forward.

Previous Research Ideas:

1. Preferential Solubility –

A proposed title is: “Preferential Solubility of High Glide Blends in Lubricating Oils and System Effect on Fractionation”. This is a work in progress, the person previously driving this has left the industry and Chris Seeton volunteered to move this forward. Greg Smith, Sarah Kim and Sheli Porter volunteered to help.

New Proposed Research Ideas:

An idea of looking at dielectric strength of lubricants and lubricant/refrigerant blends was discussed. Similar ideas are being looked at by TC 8.1 and TC 3.1. The committee decided to but this on hold.

Joe Karnaz provided an update on discussion that took place at the research subcommittee meeting regarding the development of a section 3 research roadmap. Volunteers were identified to provide representation from the various section 3 groups.

Program – Ed Hessel

Ed summarized the program chair meeting that he attended. He found the meeting informative and allowed him to meet the upcoming CEC track chairs. A new electronic submission system is going to be implemented. Some suggestions were made to incorporate the submission into more of a word document format. Ed also encouraged all to use the virtual conference.

A new combined Section 3 Program meeting has held on Monday and future direction was outlined.

For Chicago TC 3.4 sponsored as part as the mini track held at the Expo. The program overall appeared to be very successful with good comments and allowed for others outside of our group to discover what we do. For the 3.4 program Ed Hessel, Julie Majurin and Joe Karnaz made presentations regarding lubricant options for lower GWP refrigerants and equipment.

155 submissions have already been made for the Houston ASHRAE this summer. Based on this information it was decided that TC 3.4 would not submit for Houston.

Based on the TC 3 program meeting it was decided to recommend to the TC's to focus on another mini track for Atlanta. Chris Seeton showed a spreadsheet with some ideas. A suggestion was made to pull from Purdue conference submissions for potential seminar topics for Atlanta. Program submission for Atlanta is August 3, 2018.

Handbook - Julie Majurin

The committee made the necessary updates to the handbook and submitted. Casey Scruggs volunteered to take over as Handbook Chair and membership will be needed. The committee thanked Julie for her efforts leading the handbook team.

Standards – Rob Yost

Standard 86 “Methods of Testing the Floc Points of Refrigeration Grade Oils” – reauthorized in St. Louis, no action required until 2020.

Standard 99 “Refrigeration Oil Description” – chaired by Chris Seeton. This standard has been changed to a guideline with name GPC 40 and has been published and now on the five year cycle so no action will be needed until 2021.

Standard 172 “Method of Test for Insoluble Materials in Synthetic Lubricants and HFC Refrigerant Systems”. This standard was published in 2017 but recently it was discovered that a change is needed to the specification to make it clearer on lubricant-refrigerant concentrations and reference size of glass tubes. Former chair Ed Hessel will contact ASHRAE standards to investigate the process for change. Rob Yost mentioned that this may be accomplished through an errata correction.

SPC 218 “Method of Test for Lubricant and Refrigerant Miscibility Determination”—chaired by Brad Boggess. The committee has had some conference calls prior this meeting and met on Monday. They are attempting to have a working draft for submission prior to the March 6th deadline.

- **New Ideas**

There was some discussion in other TC’s such as TC 3.1 and TC 3.2 if there is need to revise Guideline 6 when it is up for its 5-year cycle to include other information. This TC discussed the need to include more lubricant related sections or see if we need to start a new guideline similar to Guideline 6 but with more focus on lubricants, system chemistry, etc. The idea was tabled for further discussion.

Webmaster – Dave Vincent

The website will be updated with the current information that was recently passed onto Dave Vincent. He will also post the handouts that were received at the Section 3 Chairs meeting.

MTG Update –Low GWP Lower Alternative Refrigerants – TC 3.4 Represented by Joe Karnaz

This committee know meets on Sunday evening (Part A) and reconvenes Wednesday morning (Part B) to cover the activities. In addition subcommittee groups for research, codes and standards along with programs has separate meetings. The focus of the Sunday meeting was on three research projects:

- RP1806 – cost was over \$750K and part 1 is complete and part 2 has been delayed, no set date for completion was given but the MTG chair tasked the PMS to see if the project can be finished by the Houston meeting but this seems like a difficult task.
- RP1807 – is nearly complete and the principle investigator provided updates via a seminar presentation at this conference.
- RP1809 – work is about 80% complete.

Old Business – Chris Seeton

No old business.

New business – Chris Seeton

No new business.

Next meeting

2018 ASHRAE Annual Meeting Houston, TX June 23 – June 27, 2018.
TC 3.4 will meet Tuesday, June 26th.

Adjourn – Chris Seeton

The chair closed the meeting at 3:00 pm through a motion by Joe Nigro and second by Roberto Urrego..