

Draft Meeting Minutes – Annual 2016, St. Louis
ASHRAE Technical Committee 10.2
Automatic Ice Making Plants & Skating Rinks

Date: Monday, June 27, 2016

Time: 4:30 PM to 6:30 PM

Place: Room 242, America's Convention Center, St. Louis, MO., USA

Voting Members for this Meeting:

Greg Scrivener – Chair

Wayne Borrowman – Vice Chair/Programs

John G. Davis – Secretary

Kyle Larson

John Scott – Handbook

Art Sutherland

William Wladyka

Non-Voting Members for this Meeting:

Dan Dettmers - Research

Brian Blahey

Kyle W Hasenkox

Robert Akkerman

Pradeep Kumar Bansal

Don R Blacklock

Robert S Burdick,

Daniel A Cowan, II,

Jon M Edmonds

John M Gallaher

Charles Hunter Holwerk

Reinhold Kittler

Mark M MacCracken

Dave A Malinauskas

William Jack McCartney

Michael J Saweikis

James J Shepherd

Ronald H. Strong

Total Voting Members – 7

Required for a quorum – 4

Note –

The meeting attendance sheet is attached to this report.

John Scott and Art Sutherland attended via conference call.

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- I. Call to Order, Introductions, Establish Quorum –
 - A. Meeting was called to order at 4:30PM. Attendees did self-introductions. A quorum was established with 6 voting members present. Attendance sheet is attached to these minutes. Note that John Scott and Art Sutherland attended via conference call.
- II. Review Agenda –
 - A. Draft agenda was circulated.
- III. Review and approve Winter 2016 Orlando Meeting Minutes –
 - A. The 2016 Winter Meeting draft minutes from Orlando were circulated and approved, as amended.
- IV. Liaison Reports –
 - A. Research (E. Ezzat Khalifa)
 - 1. Not present.
 - B. TAC (Jim Tauby)
 - 1. ASHRAE is encouraging more member effort in the area of published papers, manuals and ASHRAE Journal articles. There is no refrigeration track in Las Vegas (Winter 2017), but there is a refrigeration track in Long Beach (Annual 2017) - seminar proposals for Long Beach are due February 6, 2017. Greg was recognized with a lovely certificate for his dedicated service to the Society as Chair of TC10.2 during the past two years. Thanks Greg!
 - C. Staff
 - 1. Not present.
 - D. Handbook (Jay Enck)
 - 1. The committee was reminded to adhere to published milestones and deadlines for the 2018 Refrigeration Handbook revisions.
- V. Report from Chair
 - A. TC/TG Chair's Breakfast Meeting
 - 1. Greg Scrivener reported that the TC's are being encouraged to meet between ASHRAE conferences via teleconference or other means to improve productivity and reduce Conference costs.
 - B. Activity between meetings
 - 1. A TC10.2 subcommittee meeting was held at 8AM on June 27th to work through issues related to existing RTARs. See additional details below.

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VI. Subcommittee Reports and Discussion

A. Handbook

1. Report from Handbook Chairs' Meeting
 - a) John Scott was not available to attend the Handbook Chair's meeting.
 - b) John has distributed the TC's handbook chapters for review. Ice Manufacture (Chapter 43, 2014 HB) needs a thorough review for updates. Charles Holwerk will review. Ice Rinks (Chapter 44, 2014 HB) could have more of a heat recovery focus to capture current trends in the industry. Brian Blahey, Art Sutherland and John Davis will review Chapter 44. Art will author a new section of heat recovery. The TC will attempt to approve any changes at the Las Vegas 2017 Winter meeting (or by letter ballot shortly thereafter).

B. Research

1. Report from Research Chairs' Breakfast Meeting
 - a) Dan Dettmers reported that the meeting started a ½ hour late and that the coffee was weak.
2. RTAR 1727 – “Interaction of Ice Arena Space Conditioning Loads and Ice Surface Refrigeration Loads” and corresponding draft work statement
 - a) RTAR 1727 has been approved with comments. Efforts are on-going to address comments and draft a WS with milestones and a schedule of values. RACs comments revolved around the benefit/cost/complexity of developing a software tool. A consensus of opinion still supports development of a methodology to model the interface between the ice surface refrigeration load and the arena space conditioning loads with software development by others. Dan/Greg will continue to massage the WS and distribute to the TC for review/comment.
3. Research ideas
 - a) “Quantifying Good Rink Ice.” Most operators are running ice surface temperatures too low to eliminate any user complaints. “Good ice” is very subjective and user dependent. Significant operating savings are achievable if rink operators could be convinced to raise their ice surface temperatures. Art Sutherland proposed a new RTAR, “Quantifying the Merits of Ice Rink Flood Water Treatment.” The TC agreed that a test method that quantifies ice friction, hardness, etc. may need to be defined to support the above research topics. Therefore, Dan/Greg will draft an RTAR related to a test methodology to quantify rink ice quality.

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C. Standards

1. Standard 15 Update
 - a) Effort is on-going.....

D. Programs

1. Upcoming Meeting Tracks
 - a) TC agreed to not submit program seminar topics for Las Vegas (Winter 2017) and Long Beach (Annual 2017) but will focus on Conference Papers for Chicago (Winter 2018).
 - b) The following individuals will draft Conference Paper abstracts for the TC to review in Las Vegas:
 - (1) Kyle Larson – refrigerant comparison
 - (2) Dan Dettmers – heat recovery in curling rinks
 - (3) Art Sutherland – NH₃/CO₂ heat recovery
 - (4) Wayne Borrowman – heat pumps
 - (5) Greg Scrivener – floating head pressure control in small rinks

VII. Membership

A. Review Roster

1. Roster changes that will go in effect as of July 1, 2016:
 - a) Greg Scrivener will become Research Chair, non-voting member
 - b) Wayne Borrowman will become Chair
 - c) John Davis will become Vice Chair/Programs
 - d) John Gallaher will become Secretary.
2. Voting members for the Winter 2017 Meeting are:
 - a) Wayne Borrowman
 - b) John Davis
 - c) John Gallher
 - d) John Scott
 - e) Kyle Larson
 - f) Art Sutherland
 - g) William Wladyka

VIII. New/Unfinished Business

- A. Reinhold Kittler has submitted documents related to ice rink design issues. Reinhold's concerns will be reviewed at the Las Vegas meeting (agenda item).

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- IX. Review and Assign Action Items
 - A. Charles Holwerk – review Chapter 43, 2014 HB.
 - B. Brian Blahey, Art Sutherland and John Davis - review Chapter 44, 2014 HB.
 - C. Art Sutherland – draft heat recovery section for Chapter 44, 2018 HB.
 - D. Greg Scrivener and Dan Dettmers – finalize WS for RTAR 1727.
 - E. Greg Scrivener and Dan Dettmers – draft RTAR to develop a test method to quantify “good ice.”
 - F. Kyle Larson, Dan Dettmers, Art Sutherland, Wayne Borrowman and Greg Scrivener – draft conference paper abstracts for Chicago 2018 Winter Meeting.
- X. Next Meeting
 - A. 2017 Winter Meeting, Las Vegas, January 30th, 2017, 4:30 – 6:30PM, location TBD.
- XI. Adjourn
 - A. Meeting was adjourned at 6:15PM.

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TC 10.2 SUMMER 2016 ST. LOUIS

| <u>NAME</u> | <u>AFFILIATION</u> | <u>E-MAIL ADDRESS</u> |
|-----------------|---------------------|--------------------------------|
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TRAVEL BRILLIANTLY.