

# Orange Spiel



Juicy News from ASHRAE's Orange Empire Chapter



## MEETING INFORMATION

**TUESDAY, JANUARY 16, 2018**

### JT SCHMID'S ANAHEIM

2610 E Katella Avenue  
Anaheim, CA 92806  
(714) 634-9200

Event Time..... 5:30 –8:30 p.m.

**PLEASE E-MAIL (PREFERRED),  
OR CALL WITH YOUR  
RESERVATIONS TO:**

David Yancosky, CxA  
c/o P2S Commissioning  
[david.yancosky@p2scx.com](mailto:david.yancosky@p2scx.com)  
Direct: (562) 497-4567  
Office: (562) 497-2999

### PRICE SCHEDULE

Member Before 15 January ..... \$45  
Member After 15 January..... \$55  
Non-Member Before 15 January .. \$50  
Non-Member After 15 January ... \$60  
Student..... \$20

### REGISTRATION IS CLOSED

**IF CANCELLATION IS NOT  
RECEIVED YOU WILL BE BILLED  
FOR THE SESSION**

### REFRIGERATION AND MICROBREWERY TOUR

with Mike Thompson

### Orange Spiel Editor

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## HOPE YOU DIDN'T MISS OUR JANUARY MEETING!

### 7TH ANNUAL REFRIGERATION & MICROBREWERY TOUR



**TUESDAY, JANUARY 16, 2018**



## UNDERSTANDING REFRIGERANTS AND INDUSTRY UPDATE

Refrigerant is the most essential thermodynamic component of cooling systems. It is important to understand the intricacies of refrigerants and making the right choice for the environment. Consulting engineers, architects, system operators and building owners are responsible for understanding refrigerant technology and how it relates to system efficiency, refrigerant availability, lifecycle cost and maintenance.

We will cover the following topics:

- Understanding global regulations and how the Montreal Protocol and the Kyoto Protocol and the recent Kigali Amendment on HFCs, and how this will impact the future of the HVAC industry
- Understanding the phase out/

phase down schedules of refrigerants, and the best way to plan for the future

- Understanding how the issue of global climate change will impact the HVAC industry.
- The economics of refrigerant choice - balancing capital against lifetime energy cost.
- Learn about the next generation of refrigerants that are in development that minimize both the ozone impact, and the global warming impact of HVAC refrigerants..

Mike Thompson is global director of refrigerant applications for Ingersoll Rand. In this role, Thompson is responsible for working with Ingersoll (See **REFRIGERATION** page 3)

## KEN'S BLOG

ASHRAE Orange Empire Members – Happy 2018!!

I was happy to see the huge turnout to our January meeting hosted in conjunction with Tri County and LA chapters. Now then, into the new year!

And what a way to start... with a Refrigeration topic at JT Schmids... so, winter, refrigeration... really makes me think of Chicago. Speaking of which, are you going to be in attendance at the ASHRAE Winter Conference and AHR Expo in Chicago this month? I know that number of our team members will be headed to the Windy City, so reach out to your friends in the industry and organize a meet up with other chapter members.

As for topics, you can choose to argue whether the name Windy City is referencing the weather or the politicians. If you choose weather, keep in mind that you can get all the Wind Data that you need from the ASHRAE.org climate data center, or select data from the Fundamentals handbook.

January's note is a quick one, but I would be remiss if I didn't remind everyone reading that we will be celebrating the ASHRAE Orange Empire Chapter's 50th Anniversary later this year... keep an eye out for the announcement via email or on the website!! We want to celebrate with everyone! Cheers! **Ken Golovko** 🍷



## THE MAN MOLLIER

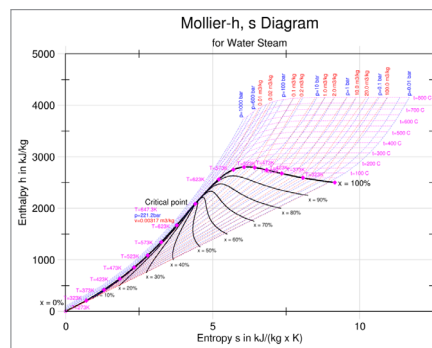
Richard Mollier, born in Trieste, Italy, in 1863 was a professor of mechanical engineering in Dresden, Germany, from 1897 until his retirement in 1931. He was one of a group of scientists and engineers in Southern Germany in the late 19th century including Clausius, Linde and Zeuner who did advanced research on the understanding of the science of refrigeration.

Mollier's contribution was uniquely practical and is still ensconced in the design engineer's tool box. Engineers had been building and operating vapor compression refrigeration systems for nearly 50 years but had a very sketchy idea of what was really happening inside those closed systems.

Beginning the 20th century, Mollier undertook the meticulous task of tabulating the thermal properties of various fluids including ammonia, carbon dioxide, steam and moist air, enabling a more accurate computation of system performance, and in 1904 he took the radical step of plotting this information in easy-to-use charts.



**Richard Mollier**

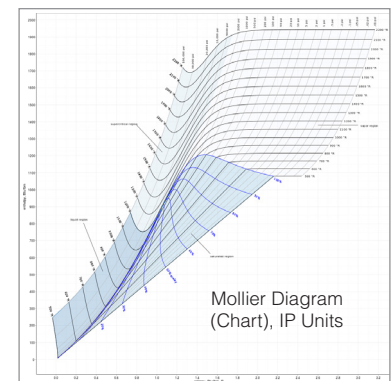


The two most commonly used charts are the temperature-entropy diagram and the pressure-enthalpy chart. The former tends to be favored by academics in thermodynamics because the area under a process traced on the chart is proportional to the work done, whereas the latter form is more useful to practical engineers because the enthalpy difference multiplied by mass flow

gives the heat transferred in the evaporator or condenser, and the work done in the compressor.

To make the scale more useful, the pressure is often plotted on a logarithmic axis up the side of the chart, and enthalpy is plotted on a linear scale along the bottom of the chart. Mollier's charts were of such immense practical value that they quickly became widely used by scientists and engineers around the world as the standard method of calculating refrigeration system performance.

In 1923 at the World Congress of Thermodynamics in Los Angeles it was agreed that a graph with enthalpy as one of its axes would be forever known as a Mollier Diagram. -END- 🍷



**CHAPTER OFFICERS**

President ..... Kenneth Golovko  
 President-Elect..... Derrick Wyka  
 Vice President..... Greg Glover  
 Treasurer..... David Lawson  
 Secretary ..... Ben Chesser

**BOARD OF GOVERNORS**

Jeff Conrad      Stephen J. Rawski, P.E.  
 Eric Decker      John Sawyer  
 Craig F. Hofferber      Matthew Waller, P.E.

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Kenneth Golovko

**CRC ALTERNATE**

Greg Glover

**ASHRAE  
 ORANGE EMPIRE CHAPTER**

**2017-2018  
 PARTIAL ROSTER**

**SPIEL DEADLINE**  
**The February deadline**  
**for articles or ads is**  
**FRIDAY,**  
**FEBRUARY 16, 2018**

**COMMITTEES AND CHAIRPERSONS**

Attendance.....TBD  
 Communications/Webmaster.... David Yancosky  
 Grassroots Gov't Advocacy.....Eric Decker  
 Golf Tournament..Dan Davitt/Michael Garabedian  
 Historian..... Craig F. Hofferber  
 Membership Promotion ..... Jeff Hanzel  
 Newsletter Editor.....Robert Hagstrom  
 Programs/Chapter Tech Transfer ....Greg Glover  
 Refrigeration.....Jeff Conrad  
 Research Promotion.....John Sawyer  
 Student Activities..... Margaret Peterson  
 Table Top Displays.....Greg Glover  
 YEA Chair.....Charlotte Dean

**REFRIGERATION**

*(continued from page 1)*

Rand's climate businesses and customers to communicate the potential impact of future policies on products and markets.

He also participates as an industry expert for low global warming potential refrigerant applications in the United Nations Montreal Protocol process. Prior to this role, Thompson worked for Trane in field sales and was the global marketing manager for large chillers. Thompson has more than 27 years of experience with Trane and the heating, ventilation and air conditioning (HVAC)

industry. He earned a bachelor's degree in mechanical engineering from Texas A&M University.

Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Their family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. Ingersoll Rand is a \$12 billion global business focused on sustainability.



**JT SCHMIDS  
 BUFFET**

**ATLANTIC SALMON  
 AND CHICKEN**

Teriyaki Salmon on a bed of white rice, with Grilled Lemon Herb Chicken.

Served with fresh seasonal vegetables and garlic mashed potatoes.



**HAPPY**  
*New Year*

*from your Chapter Officers, Board of Governors,  
 and Committee Members*

## ORANGE EMPIRE CHAPTER

### WINTER/SPRING 2017/18 SCHEDULE

#### MEETING LOCATION:

#### JT SCHMID'S ANAHEIM

2610 E Katella Avenue  
Anaheim, CA 92806  
(714) 634-9200

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#### SEPTEMBER 26, 2017

*Dinner: Title 24 Commissioning*  
*Theme: Membership Appreciation*  
*Place: Holiday Inn, Santa Ana*

#### OCTOBER 25, 2017

*Dinner: Dynamics of Riser Design in Skyscrapers*  
*Theme: Joint Meeting with ASPE*  
*Place: Holiday Inn, Santa Ana*

#### NOVEMBER 14, 2017

*Dinner: Energy – Design and M&V*  
*Theme: Energy Night*  
*Place: Holiday Inn, Santa Ana*

#### DECEMBER 12, 2017

*Dinner: Sustaining ASHRAE Through Leadership*  
*Theme: Joint Meeting with So. California and Tri-County Chapters*  
*Place: Gas Company Energy Resource Center, Downey*

#### JANUARY 16, 2018

*Dinner: Refrigerants Update*  
*Theme: Refrigeration and Membership Night*  
*Place: JT Schmid's Restaurant, Anaheim*

#### FEBRUARY 27, 2018

*Dinner: Design and System Considerations for Boilers*  
*Theme: Research and Past Presidents Night*  
*Place: Holiday Inn, Santa Ana*

#### MARCH 13, 2018

*Dinner: TBD*  
*Theme: Joint Meeting with San Diego Chapter*  
*Place: Bagby Beer Company, Oceanside*

#### APRIL 24, 2018

*Dinner: Modular Chilled Water Systems*  
*Theme: Student Night*  
*Place: TBD*

#### MAY 29, 2018

*Dinner: 2018-2019 Installation Night Dinner*  
*Theme: Officer and Board Installation*  
*Place: TBD*



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ASHRAE Orange Empire  
Chapter  
[www.oeashrae.org](http://www.oeashrae.org)

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with Mike Thompson

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Santa Ana, CA 92735