

# Tips on Hosting Successful Refrigeration Focused ASHRAE Chapter Meeting

Many ASHRAE Chapters have asked the CTTC for assistance in developing a successful refrigeration program for their chapter meetings. Many find it difficult to attract and retain members whose focus is industrial refrigeration systems (i.e. built-up systems that typically use ammonia). This document has been drafted to help provide guidance in that area.

## *Co-sponsor the event with another organization or company focused on industrial refrigeration.*

There are a few organizations that focus on refrigeration and refrigeration related activities. Co-sponsoring the event would benefit both organizations. Some potential organizations and their contact information are listed below:

- **RETA (Refrigerating Engineers & Technicians Association) [www.reta.com](http://www.reta.com) – an international society of individuals and companies involved in the design, operation, and service of industrial refrigeration systems. They have many chapters that can be found on the website.**
- **IIAR (International Institute of Ammonia Refrigeration) [www.iiar.org](http://www.iiar.org) – recognized throughout industry and government around the world as the authoritative source of information about ammonia refrigeration. IIAR does not have chapters, rather they have members scattered throughout the world. Contact IIAQ HQ for information on local members that may be recruited as potential speakers.**
- **IIR (International Institute of Refrigeration) [www.iifir.org](http://www.iifir.org) – a scientific and technical intergovernmental organization enabling the pooling of scientific and industrial know-how in all refrigeration fields on a worldwide scale. IIR is an international organization, based in Paris that is composed of 61 member countries and many other companies, laboratories and universities. Like IIAR, they have members scattered throughout the U.S.**
- **IARW (International Association of Refrigerated Warehouses) [www.iarw.org](http://www.iarw.org) – an organization composed of warehouse owners and operators. They also support WFLO (World Food Logistics Organization) [www.wflo.org](http://www.wflo.org), a research organization dedicated to advancing the proper refrigeration and freezing of food and commodities.**
- **IACSC (International Association for Cold Storage Construction) [www.iacsc.org](http://www.iacsc.org) – represents member companies as an industry, providing a forum for innovative ideas, promoting standards of practice for the cold storage construction industry, sponsoring professional education programs**

**and promoting the interests of the industry in political, legal and regulatory arenas.**

There are also numerous other organizations whose focus is on food production or distribution whose members share interest with refrigeration engineers on select topics. These organizations include: International Dairy Foods Association, National Frozen & Refrigerated Food Association, American Frozen Food Institute and many other. Contact local food producers for information on the organizations they belong to and actively participate in at the local/regional level.

Another possibility for co-sponsorship may be a large food processor headquartered in the area. They may wish to host a meeting and provide a tour of their facility or provide speakers from their corporate headquarters.

Finally, do not forget the ammonia fertilizer and natural gas distribution industries. Both operate very large storage tanks of liquid product that must be stored at extremely low temperatures. An explanation and tour of one of these facilities is sure to draw a crowd.

### ***Current Topics of Interest to Industrial Refrigeration Owners, Operators, Contractors and Engineers***

Picking a timely and interesting topic is also crucial to attracting a potential audience. Many of the interest, concerns and needs of industrial refrigeration operators and designers are not the same as the HVAC world.

- **Introduction to ammonia refrigeration**
- **Presentations related to OSHA's Process Safety Management program – Many ammonia refrigeration plants are being challenged by OSHA's PSM and EPA's RMP requirements. As such, they are always grateful for presentations that will help out. Potential topics include:**
  - **Complying with PSM/RMP**
  - **Developing a successful operator training program**
  - **Meeting PSM's mechanical integrity requirements**
  - **Calculating refrigerant inventory and leak rates**
  - **Preparing for PSM audit**
  - **Developing Standard Operating Procedures**
  - **Maintenance best practices**
- **Presentations on ASHRAE Standard 15**
  - **Relief vent piping, how to use the new methods in ASHRAE Std. 15**
  - **Determining emergency ventilation rates**
- **Refrigerants**
  - **The use of CO<sub>2</sub> as a refrigerant**
  - **Ammonia versus halocarbon refrigerants in various applications**
  - **"Alternative" refrigerants including new man-made and old natural refrigerants (i.e. CO<sub>2</sub>, propane, isobutene, HFO 1234yf etc.)**

- Options for those trying to remove all Class I and Class II refrigerants from their facility
- Methods to reduce ammonia or other refrigerant charge
- Protecting ammonia systems from methamphetamine related thefts/homeland security issues
- **Energy Efficiency Improvements**
  - Variable frequency drives on compressors, evaporator fans or evaporative condenser fans, water and refrigerant pumps
  - Conversion from liquid injection to thermosiphon oil cooling
  - Improved evaporator defrosting
  - Possible improvements as results of a better control system
  - Use of thermal storage in industrial facilities (e.g. chilled water, ice or passive use of product mass)
- **Presentation of an IIR Standard or Bulletin**
  - IIR Standard 2
  - IIR Bulletins 109 & 110 and their eventual transformation into mechanical integrity standards
  - IIR's Refrigeration Piping Handbook
- **Food storage and preservation issues/updates**
- **Warehouse logistics**
- **Improvements in transport refrigeration (refer truck, train, ship and airplane)**
- **Plant Tour to Brewery, Soft Drinks, Ice Hockey / Skating Rinks, Food Distribution Center (Cold Storage), Food Processing, CO2 Recovery System. This is basically with emphasis on Tour of the Machine Room where the Refrigeration System is located.**
- **Plant Tour of Refrigeration Equipment Manufacturing Plants**