The Herring Choker

ASHRAE
NB PEI CHAPTER

The next Chapter meeting is scheduled for **April 8th** at **Future Inns Moncton Hotel and Conference Centre (40 Lady Ada Blvd., Moncton).**

This month's meeting will feature a presentation by ASHRAE *Distinguished Lecturer* - T. David Underwood.

Lecture Topic: *Commissioning Tips Tricks and Techniques*

As a long time practitioner, the speaker will discuss some of the tips, tricks and techniques to successfully commission any project. In the tips portion, the discussion will focus on such items as starting early with the development of Owners Project Requirements (OPR) or alternatively how to handle projects that lack OPR (more typical). For example, adding value no matter what stage of the construction you enter the commissioning process. Tricks will look at how to engage all participants in the project and ideas about how to proceed cooperatively. Techniques will review methods for pricing, performance verification and operator training.

A social hour will begin at 5:00 PM with a cash bar, followed by the presentation at 6:00 PM, and dinner at 7:00 PM.

Please note:
Meal cost for members has increased to $25.00.
Students will continue to be charged $10.00.

Executive Meeting Notice

A reminder to the Executive, Board of Governors, and the Committee Chairpersons that the Executive meeting will start at 4:00 PM at **Future Inns Moncton Hotel and Conference Centre.**

Speaker Biography:

David Underwood has served ASHRAE for many years at the chapter, region and society. He was the founder of Isotherm Engineering Ltd. and Evaporative Tower Services Inc in Ontario, Canada. He received his engineering degree from the University of Manitoba in 1964.

Mr. Underwood is a Fellow in ASHRAE. He has received the Distinguished and Outstanding service awards and the William J. Collins award. He has served two years as an ASHRAE Vice President and is currently the Society Treasurer.

In his role on the Ontario Provincial Advisory Committee for the certified refrigeration trade, he developed the trade examination and courses for refrigeration apprentices and coauthored a safety manual for refrigeration mechanics. For many years Mr. Underwood was an active participant on the B-52 Mechanical Refrigerant Code committee for Canada. He also actively participated in developing the Refrigerant Management regulation for Ontario. Currently he serves on the Model National Building Code Committee.

Mr. Underwood has extensive experience in training operators and technicians through his role in Commissioning systems as a primary function of his design/build firm.

Summary of March 2014 Meeting:

The March 2014 meeting was a presentation by Roger Nasrallah from Enertrak on Natatorium Dehumidification.

The presentation highlighted the various factors that contribute to indoor pool designs, such as heating and dehumidifiers. When designing a pool our design goals must be to protect the building, save energy, provide comfort such as temperature, humidity and IAQ (Indoor air quality).

Moisture through the wall and heat loss can cause damage to buildings. To prevent this, designer must include a vapor retardant.

Condensate on windows is another issue to consider and to this, the designer has to keep the temperature of all surfaces above the dew point, used air movement to prevent the cold surfaces to be colder than the room dew point and use vapor barrier.

The IAQ has a large impact on human health parameters such is bacteria, viruses, fungi etc. When designing the system it must be for the optimum zone for relative humidity.

The higher the water temperature > Evaporation
When the humidity is lower the evaporation increase which leads to more makeup water required, more chemical usage and higher operation cost.

Load Calculation for the amount of water that needs to remove from the air to prevent condensation.
In order to provide the best result we must know:
Surface of each body of water

- Room surface and height
- Water temperature for each body of water
- Design space temperature & humidity
- Activity factor – type of used
- Spectators & Bleacher area
- Glass Surface (window, skylight,..)
- Ventilation air amount (outside air)
- Any water toys

When selecting a unit designer must consider the following:

- Evaporation rate from water surface
- Amount of ventilation air required
- Moisture content of ventilation air
- Moisture content of spectators
- Number of air changes
- Total required capacity during occupied & non- occupied periods
- Performance of selected unit

Air distribution is also a large part of the pool design:

- All surfaces must be kept above dew point
- Must have at least between 4 to 8 air turns per hours to prevent moisture migration and stratification.
- Must have between 3 to 5 CFM/sqft of air distribution over all glass surfaces to prevent condensation
- A system can be install from the floor or the ceiling to prevent condensation on the window

- Sensible Load calculation:
    - A sensible heating & cooling load calculation must be done
    - Typically for a refrigeration based system the maximum air temperature is 90°F

Pool chemistry:

- The safe way : way-air you
- Air can only be as good as the water
    - AHU cannot remove chemicals from the air
- Water needs to be treated physically
    - Good filtration system
    - UV light treatment
    - Keep a PH of 7.4
- People add unwanted chemicals
- There are over 30 chemicals that continually affect our pool water and they shouldn't be there
- The smell from pools is not chlorine but Trichloramines

Pool cover can save 20% on building heating, 30% on pool chemicals and 40% on water heat.

CONGRATULATIONS!!

Paul Tatlock of MCA Consultants, presenting the ASHRAE Holland College Award to Doug Ramsay.

NB/PEI ASHRAE Chapter Meeting Schedule 2013/2014

May 7-8, 2014
MEET Show

June 10, 2014
Topic: Tour of Ecoparc Community Centre – Cormier Village, NB