



CALENDAR

DECEMBER

- 12 4:30 Board Meeting / Radisson
- 13 11:30 Chapter Meeting / Radisson
- 15 6:00 Holiday Social / The Duce

JANUARY

- 10 4:30 Board Meeting / Radisson
- 10 5:30 Chapter Meeting / Radisson
- 17 11:30 ASPE / Aunt Chiladas
- 28—2/1 Winter Conference & AHR Expo / Las Vegas

FEBRUARY

- 13 4:30 Board Meeting / Radisson
- 14 11:30 Chapter Meeting / Radisson
- 16 2:00 Annual Tabletop Product Show / El Z
- 21 11:30 ASPE / Aunt Chiladas

MARCH

- 10 7:00 ASPE Golf
- 14 4:30 Board Meeting / Radisson
- 14 5:30 Chapter Meeting / Radisson
- 21 11:30 ASPE / Aunt Chiladas

APRIL

- 7 6:30 Annual Golf Tournament / TBD
- 10 4:30 Board Meeting / Radisson
- 11 11:30 Chapter Meeting / Radisson
- 18 11:30 ASPE / Aunt Chiladas

MAY

- 9 4:30 Board Meeting / Radisson
- 9 5:30 Chapter Meeting / Radisson
- 16 11:30 ASPE / Aunt Chiladas

JUNE

- (9) 7:00 Annual Chapter Awards Dinner / TBD

SEPTEMBER

- 12 5:30 Chapter Meeting / Radisson

BEAU TURNER
CHAPTER PRESIDENT 2016/17



My number one goal this year is to increase meeting attendance by picking topics that are interesting to our membership, such as our presentation on conditioning cannabis grow rooms. Other topics we're looking to cover this year include ethics, panel discussion on the building process, BIM coordination, among many other topics. We are always looking for other great meeting topics. Please feel free to email me any suggestions.

We're looking forward to hosting more Young Engineers in ASHRAE this year. There will be at least 4 events this year and we will most likely be returning to The Yard for another bags tournament.

Please consider submitting a project or colleague for one of our annual Chapter Awards. Avoid the rush! As an industry, we want to encourage good behavior, and recognition is essential.

I'd like to thank all of the volunteers that make our Chapter so great, without volunteers there would be no local ASHRAE community. If you are interested in getting more involved in the Chapter please let me know. We are always looking for more volunteers and there are always new positions opening up! bturneraz@gmail.com

ATTENDANCE SCORECARD

December (Ethics):	54
November (Cannabis):	45
October (Data centers):	66
September (Controls):	51

LOOKING AHEAD: JANUARY MEETING TOPIC
(La Rue Morgue)

In 2006 Roy Otterbein, P.E. testified as an expert witness in a murder trial in Indiana. The subject of the testimony was his expertise in evaporative cooling. The drying time of a washcloth found at the scene of the crime was the center of discussion and Mr. Otterbein helped to establish the timeline using this piece of evidence. Roy's presentation will discuss the case and how he was able to help.

Mr. Otterbein holds a bachelors and masters degree in physics from George Washington University and a masters in mechanical engineering from ASU. He holds several patents pertaining to evaporative cooling and has helped develop many of the standards used to test evaporative coolers. He has also been published in the ASHRAE Journal, Home Energy, and ASHRAE Transactions.

DELICIOUS TOPIC, SEE YOU JANUARY 10 !!

AND IN THE REARVIEW MIRROR:

ETHICS DISCUSSION IN DECEMBER

The December topic (Ethics) was led by ASHRAE DL Dr. Julia Keen. In a refreshing break with past meetings, we did group discussions on case study topics in the vein of ethics. The groups were armed with copies of ethics guidelines from Arizona, NSPE, and ASHRAE. [Did you know ASHRAE has an ethics code? I am now unsure of my membership status –pm]

JUST HOW OLD IS THE PAST?

From the [Arizona ASHVE] organizational meeting held February 16, 1953: "The first meeting was opened by Mr. Vern Carns. There were twenty-eight men present."

STOCKING STUFFERS?

ASHRAE CERTIFICATIONS AVAILABLE

BUILDING ENERGY ASSESSMENT PROFESSIONAL

BUILDING ENERGY MODELING PROFESSIONAL

COMMISSIONING PROCESS MANAGEMENT
PROFESSIONAL

HIGH-PERFORMANCE BUILDING DESIGN
PROFESSIONAL

HEALTHCARE FACILITY DESIGN PROFESSIONAL

OPERATIONS & PERFORMANCE MANAGEMENT
PROFESSIONAL

(IN DEVELOPMENT) BUILDING COMMISSIONING
PROFESSIONAL

MIX & MATCH GAME: Match this alphabet soup list to the certificates above: CPMP BEMP BCxP BEAP OPMP HFDP PMBS

TECHNICAL NOTE:

GETTING THE MOST OUT OF YOUR HYDRONIC
PIC VALVES DURING START-UP

-Gabe Millican, PE

President, Millican Engineering LLC

There is no question that pressure independent control (PIC) valves are gaining traction as the balancing method of choice in hydronic systems. Because a PIC valve encompasses both the method of control and method of balancing within a single unit, the installation time is reduced. Because they are pressure independent, the valve can be easily adjusted (usually with common hand tools) without the need for an iterative hydronic balancing process, reducing start up time.

PIC valves are known to provide long term advantages, I'd like to focus on short term advantages they can offer during the start-up process.

Typically the test and balance (TAB) process occurs near the end or even after the central plant start-up process. Control system programming and turning also tends to occur late in the start-up process. This leads to a plant that is being started up with little to no control. What control algorithms that are in place are likely untuned, underdamped, or undergoing changes.

So what can we do? Once small aspect we can control is the PIC valve. Let's not wait until the bitter end of the process to finally turn that knob and set that valve. Why can't we do that upon installation?

What would happen if the PIC valve was set upon installation? Most PIC valves on the market today have either a percentage scale or flow scale printed onto the valve. It should be as simple as merely looking at the engineered plans (or submittal) to understand the flow requirements and then locking in that knob to the required flow? With this procedure you have just set the maximum flow thru each valve and thus the entire system. You have just added a small bit of control to the system and have an accurate maximum flow set in the system.

A benefit of this is that chillers, pumps, by-pass valves, etc will see a somewhat accurate flowrate during start-up. This can mitigate constant valve cycling, VFD cycling, chiller cycling that might be common during start up.

If it's so easy, why do we wait until the end? It seems that while the valve technology has improved, our installation process has not caught up. We still have the same mentality that the valve will be set during the typical TAB process. Let's coordinate with the mechanical contractor, controls contractor, and test and balance agent who will be setting the valves and at what point in the process.

A claimed advantage of the PIC valve is how easily they are set, once and done. Coordinate to get those valves set early in the process and prevent your plant from being wildly out of control during that start up process.

MORE STOCKING STUFFING:

THE BEST ASHRAE HANDBOOK COLLECTION

Many engineers take pride in having a bookshelf filled with all the issues of the Handbook, all the way back to 1803. Or so. (Guilty, here)

The advent of the CD version has meant some interruption of this habit. Well, no more! Now the latest versions (the Final Four) are on line for free to Members. You just log in, select the Handbook link, and pick the one you want. My shelf is lonely.

BUT, if you design projects, consider keeping old copies back to, oh, two years before the statute of limitations. Forensic findings would be based on the then-current edition of a Handbook. Bummer.

That aside, this is one of the many ASHRAE resources found at ashrae.org. Browse away: cheaper than Ambien.

CHAPTER HOLIDAY SOCIAL **DECEMBER 15**



Or be isolaterally rectangular.

ASHRAE GOVERNMENT AFFAIRS INFO:

<https://www.ashrae.org/government-affairs/government-affairs-updates>

An interesting compilation of actions by governments (at all levels) regarding the built environment, emphasis on energy.

DECEMBER MEETING: THINKING CAPS ON!



COMPLAINTS? You may address these to goawayyou@lost.ocd

SUGGESTIONS? Positive ones: pmenconiengineer@gmail.com. Negative ones, see "complaints", above.

Pete Menconi, PE
Editor