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Volume 43, Issue 6



Next Meeting WEDNESDAY, February 10th, 2016

LANTANA Randolph, MA

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Society email aspe@aspe.org Society Website www.aspe.org Boston Chapter Website www.aspebostonchapter.org



President's Report

We had a great turnout at the Chateau despite the snow, slippery roads and unusually bad traffic.

See What You've Missed

ASPE has been actively developing progra and services that will help you elevate your career status and give you the knowledge, tools, and resources to become a leader in the industry, including:

 An online plumbing system design certificate program with UCLA Extension
 An associate degree curriculum and certification program for plumbing design

technicians
 American National Standards on rainwater

ASPE Tables Book mobile app ASPE Young Professionals special-interest

group Regional workshops on plumbing system

American Society of

Plumbing Engineers

harvesting and siphonic roof drainage
 ASPE/IAPMO roof drain and Hunter's

curve research
 The new Green Plumbing Design

Eddie Van Giesen did a good presentation on rainwater harvesting system design parameters. Two things I got out of the meeting are pre-filter is possibly the most important part of the system. Second the ASPE Rainwater Catchment System book is a good resource.

If you plan to take the CPD exam this year we are offering a CPD review class to members for 75\$ and non-members for \$175. See flyer for details. Thank you to Derek Sylvia for spearheading this effort; thank you to the education committee and a big thank you to all the instructors who will be conducting the classes.

Did anyone notice the format change or the picture on the front cover change?

See you all Wednesday February 10th.

Laurence D. Johnston CPD, President, Boston Chapter ASPE



Special Membership Deal for Past ASPE Members Are you a past member of ASPE? Well we want you back!

ASPE is offering a cost-savings membership program to help past members reinstate their ASPE membership.* To take advantage of our "We want you back!" offer, call 847.296.0002 x227 or e-mail skidd@aspe.org for more details.

Hurry, this promotion ends soon!

*This one-time opportunity cannot be combined with any other membership promotional offering, tran

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Technical Report

If you are reading this I hope that the Patriots just beat the Denver Broncos, my predication is 28-14. If I am right you may not see me at the next meeting. If you were not able to attend the January meeting you missed out on some good stuff. This past month we welcomed Mr. Eddie Van Giesen to our chapter's monthly meeting at the Chateau in North Andover on Rainwater harvesting. He discussed the ARCSA/ASPE 63 Rainwater Catchment Systems, as the main ASPE Design Standard for Rainwater

Catchment systems. Below is a list of some of the key points that Eddie covered in his presentation:

- Rainwater is defined as water from natural precipitation that is not contaminated by use.
- Harvested rainwater should not come from green roofs or vehicular parking surfaces due to contaminants.
- Cisterns can be installed either above or below ground.
- Eddie recommends that all cistens should have aeration.
- To prevent your tank from going septic, install a vent that goes to atmosphere.
- Pump for the tank should always be flooded suction.
- If you are going to use die for flushing toilets, make sure the owners knows how to properly use it. Eddie talked about a case where an owner used the whole bottle of die and all of the porcelain plumbing fixtures got stained, and had to be replaced.
- The average person flushes 2.1 times per day.
- Pre-filtration should be used before rainwater enters the cistern.
 - Pre- filtration can be installed inside the building or outside the building. These devices need to be maintained regularly. Make sure that you pay attention to how much access is recommended. Some require up to 3' of clearance above the housing lid for filter removal.
 - * The recommend way of sizing the pre- filtration is on rainwater flow rate not on square footage. You can still size based on square footage but your performance of collecting water goes down.
 - The debris screen shall be corrosion resistant and have an opening no larger than 1/16 in or 1,500 microns.
- Sizing the Collection System

Surface Area ¹ (square feet) = Demand (gallons) / 0.623 ² x Precipitation Density ³ (inches) x system efficiency⁴

Notes:

- 1) Surface area is horizontal projection of roof surface and not actual surface area (measure the area the roof covers, not the actual roof).
- 0.623 (gallons / square foot/ inch) conversion factor = 7.48 (gallons/ cubic foot) / (12 inches per foot). 1 inch of water covering 1 square foot of surface area = 2.358 L (0.623 gallons)
- 3) Precipitation density period is the time period being considered (monthly, yearly, etc)
- 4) This coefficient accounts for collection system loss from leakage, evaporation, roof composition etc. Roof coefficients are approximately 0.80 to 0.85.
- Sizing the Storage

Runoff (gallons) = A x (Rainfall -B) x Roof Area

Where:

A is the system efficiency 80% to 85%

Rainfall should be expressed in inches and roof area in square feet.

- B is the loss associated with adsorption and wetting of surface use a value of 0.08 in per month
- Sizing the tank
 - The easiest way to size the tank is to get an estimate of rainwater throughout an average year based on monthly rainfall data and to assume that at the start of the wet months the tank is empty.

February Technical Topic and Meeting

The February technical topic will be on Nitrogen Generation for labs. This meeting will be held on Wednesday February 10, 2016 in Randolph, MA at The Lantana. The session will focus on why you would generate nitrogen gas vs. purchasing it. We will go into two approaches of how to generate nitrogen; membrane and PSA as well as benefits of each technology. Some of the issues of storing and handling nitrogen gas as well as bleeding off issues will be discussed. The topic will also go into the cost of producing nitrogen, some of the long term benefits, and finally realistic purity targets.

This session will be presented by Bob Littman from Air Energy, LLC in S. Easton MA. He is the co-owner and founder of Air Energy. Bob has been in the compressed air and vacuum industry since 1980 and has specialized in the lab and medical field. Bob works with many engineering firms, contractors and equipment vendors to properly specify compressed air, vacuum and now nitrogen generation equipment throughout the USA with a specific focus in New England.

Just a few reminders:

- The March monthly meeting will be held on the second Wednesday of the month (3/9/16) located at The Lantana in Randolph. The technical topic will be on pressure regulating and safety shutoff in commercial natural gas applications, presented by Jack Accardi.
- The April monthly meeting will be a joint meeting with the Greater Boston Plumbing Contractors Association (GBPCA). This meeting will be held on third Thursday of the month (4/21/16) located at Lombardo's Restaurant in Randolph. The technical topic is TBD.
- The May monthly meeting will be held on the second Tuesday of the month (5/10/16) location TBD. The technical topic vill be on Sovents.
 - * Please note these topics are subject to change. For a more up-to-date schedule please refer to our monthly newsletter and the website. <u>http://www.aspebostonchapter.org/</u>

Best Regards, Ed Nadeau, VP Technical, ASPE Boston Chapter





New Members

The Boston Chapter ASPE would like to welcome the following 3 new members:

Anthony Russo Patrick Caskin Sr. Timothy Bolvin Full Member Affiliate Member Full Member Griffith & Vary Wareham, MA Johnson & Jordan Scarborough, ME Johnson & Jordan Scarborough, ME

Boston Advances to the 2nd Round - ASPE Membership Bracket Challenge

ASPE's new Membership Bracket Challenge is well underway and now that we have won the first round, we need your helps growing our membership. We have advanced to the 2nd round and are facing the New York Chapter, which has been a membership growth juggernaut this past couple of years.

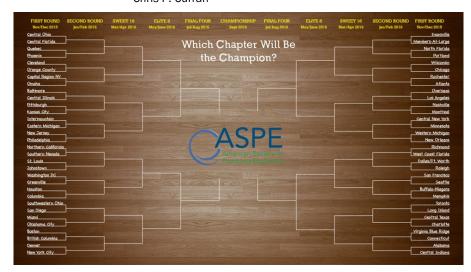
The way to advance each round is to show the largest membership growth percentage. While the Boston Chapter has been successful in recruiting new members each month (6 in December alone) what is killing our growth is the number of members that do not renew their membership in a timely fashion. We actually ended up with negative growth during the November & December time frame.

So as luck would have it, this second round will see a **Boston VS New York** matchup, and potential new rivalry. The chapter with the largest membership growth for the January and February months will move on to the next round. **In order to win this round against NY, we need your help!** I have compiled a list of all members whose Membership Renewal Date was in 2015, or is in January or February. If you are among the names listed below, please verify that you have renewed, or will be renewing your membership ASAP. (*Because of the delay between when you renew and when I receive the next updated roster from ASPE, many of you on this list may have already renewed. This list is strictly a reminder to all members based on renewal date.)* If you've renewed already, Thank you!

Members with December Renewals Kailask Jain Alan Gray Russell Martin PE Melville Mossman PE Rick Neth, EIT

Members with January Renewals Bryan Bucchianeri G.E. Stephen Byron Vasco Demelo Shaun Gallano Michael J. Hickey P.E. Sean Kelly Robert F. Kirschner Timothy Mahoney G.E., CPD John J. McCaffrey Kevin C. Nogueira CPDT Gary G. Serpa Donald Tauer Marc D. Wall

Members with February Renewals Joseph P. Barrell Jr. Michael R. Belanger Stephen A. Beliveau CPD Shaher N. Boustany John T. Carter Seshappa Chandrashekar P.E. John J DelTufo Eduard Doraci David A. Ferrari Paul Fiejdasz PE Christopher M. Garcia Lawrence F. Harding Patrick Hart CPD Andrew Holt Robert E. Jackson CPD Joel D. Katz David P. Kirschner Mark Lemire Walid M Nicolas Jay A. Pinard Zachary Rohlfs Rocco Rossi P.E., CPD Belinda Stansbury Chris P. Curran



By John Callahan, CPD, V. P. Membership, Boston Chapter ASPE



Legislative Report

Although the plumbing code does not cover plumbing design recommendations when dealing with seismic design, it is important to be

aware of what the seismic design category is for the project you are working on. The Massachusetts State Building Code makes reference to seismic design and also refers you to ASCE 7-05, which provide you with seismic design loads and issues.

What is a Seismic Design Category?

According to the International Code Council, A Seismic Design Category is a classification assigned to a structure based on its occupancy of use (Occupancy Category) and on the level of expected soil modified ground motion.

There are six (6) Seismic Design Categories:

- Category A = Very Small Seismic vulnerability
- Category B = Low to moderate seismic vulnerability
- Category C = Moderate Seismic vulnerability
- Category D = High Seismic vulnerability
- Category E and F= Very high Seismic vulnerability and near a major fault

In the plumbing and fire protection industries, a good rule of thumb would be to provide seismic bracing on all life safety related equipment and systems in buildings that are classified as seismic category C. Life safety include fire protection systems, alarm systems, emergency lightings, and detectors. For buildings that are classified as seismic category D, E or F, providing seismic bracing on all Mechanical, Fire Protection, and Electrical system will ensure suitable protection to your systems during a seismic event. When designing fire protection system on a high rise building that is classified as seismic design category C, D, E or F, a secondary on site water storage tank is required for the sprinkler demand in the building. Seismic Design Categories A and B do not appear to require any seismic considerations due to the low seismic vulnerability.

Regardless of Seismic Design Categories, in facilities such as Hospitals, Emergency Centers, Group H occupancies and water storage/pumping facilities that maintain water pressure for suppression systems. Components in Occupancy Category IV structures where needed for continued operations of the facility or its failure could impair the continued operations of the facility. All components (water, vents, gasses, sprinkler etc.) in these facilities require seismic restraints.

The architect or the structural engineer shall be able to provide you with the Seismic Design Category for any project you are working on. Please be sure you are given the "Seismic Design Category" and not the "Seismic Class" which is a whole different animal. This information is very important to know early in the design phase of your project.

If you are interested in learning more Seismic Design Category, more information can be found in the 8th edition of the MSBC, ASCE 7-05, and the ICC website.

Here is a useful link to Code Master on Seismic Design Category: http://www.co.yuba.ca.us/departments/Community% 20Development/Building/documents/Seismic.pdf

Luther Thevenin, CPD, VP Legislative

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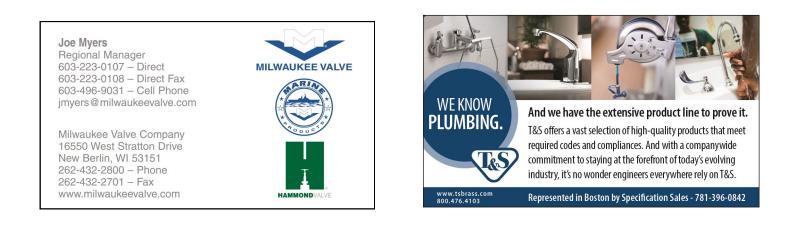


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Next Meeting

WEDNESDAY, February 10th, 2016

The Lantana, Randolph, MA

MAIN PROGRAM

Nitro Generation For Labs

SPEAKER

Mr. Bob Litman From Air Energy

PROGRAM SCHEDULE

Social Hour	5:00 – 6:00
Dinner	6:00 – 6:45
Chapter Business	6:45 – 7:00
Speaker / Technical Session	7:00 - 8:30

MENU

Chicken Soup Dijon Crusted Pork Tenderloin Carrot Cake

MEETING RESERVATIONS

\$20.00 ONLINE Reservation (Please use the electronic invitation sent to you) \$35.00 W/O Reservation

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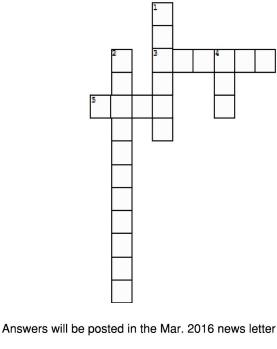
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ASPE CROSSWORD PUZZLE

Feb. 2016



Across

3. The condition when liquid rises to the flood level rim of a fixture

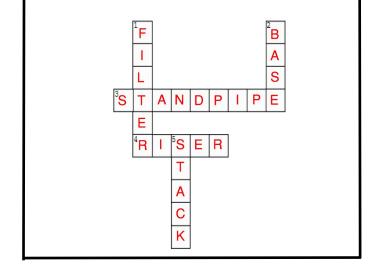
5. An enclosed passage, primarily vertical, for removal of gaseous products of combustion to the outer air

Down

1. A combination of pipes and fittings that join two approximately parallel sections of a line of pipe

2. A process where the surface of iron or steel piping or plate is covered with a layer of zinc 4. Abbreviation for drainage, waste, and vent

Answers from Jan. 2015 crossword





Robert N. Littman Vice President

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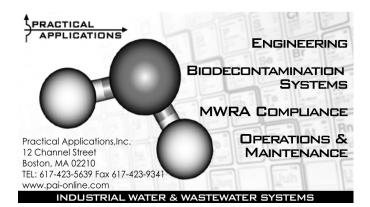
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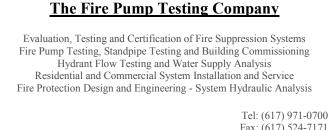
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