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American Society of Plumbing Engineers™
BALTIMORE

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MEETING FORMAT

6:00 - 6:30	Social
6:30 - 6:45	Announcements & Table Tops
6:45	Dinner Served
7:00 - 8:00	Presentation

DATE:	September 28, 2022
TIME:	6:00pm to 9:00pm
PLACE:	Olive Grove Restaurant
TOPIC:	Lab Gas Design Using the NIH DRM
SPEAKER:	Nikita Patel Sherman Engineering

Register Today

Olive Grove Restaurant & Lounge
705 N. HAMMONDS FERRY ROAD, LINTHICUM, MD 21090
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Enter the community's domain name: connect.aspe.org

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Local Chapters are not authorized to speak for the Society.
Newsletter questions? Please contact Nikita Patel

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Newsletter Advertising

- As a paid advertiser, you will have your advertisement in the newsletter for one full year (9 editions) and company logo displayed on the Chapter website.
- Ads for the year will begin in the September issue and run through the May issue.
- All ads must be paid in full prior to the advertisement being included in the newsletter.
- Advertiser must provide ads in high resolution PDF format. Logo must be provided in .jpeg format, 200px wide size
- Cost per advertisement is as follows:
  - Full Page $ 750.00
  - Half Page $ 500.00
  - Business Card $ 250.00
- Please contact Nikita Patel or Chuck Swope
- Make checks payable to Baltimore Chapter of ASPE. Please contact the Chapter Treasurer with any questions.

ASPE
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BALTIMORE

Chuck Swope, PE, CPD, LEED AP BD+C
Chapter President

President's Report

Greetings fellow chapter members and soon-to-be chapter members!

First, I want to thank you for your confidence to make me president of this great chapter and thank you, Jeff Edwards for beginning our chapter on to its new era and for allowing me to continue this energy forward. Since our founding in 1974, we have always been at the forefront of bringing the Baltimore plumbing community together, and this year will be no different. One of the things I pledge to bring is a focus on both education and networking opportunities that I'm hoping our chapter finds useful in their careers.

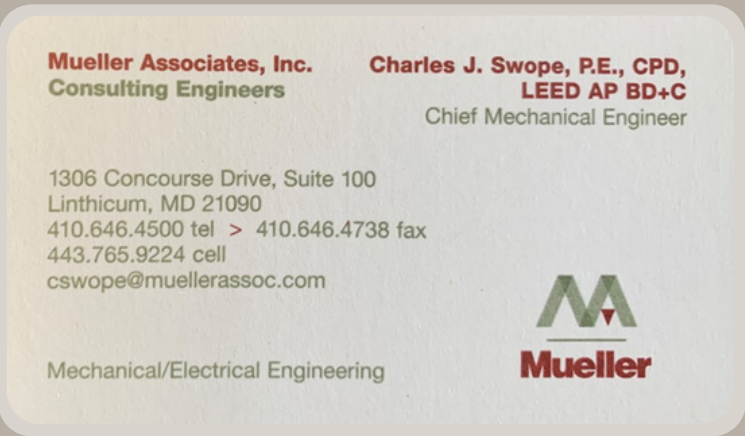
Almost all our board members elected to continue their positions as well as taking on more duties. For example, Niki Patel has taken on the role of our Education Chair as well as holding our ASPE Young Professional (AYP) Liaison position. She will be working towards our extra-curricular activities outside of our technical meetings like Engineer's Week and our continued partnership with the Local UA 486 Plumbers and Steamfitters union. Also, we have a brand new board member this season! Julian Chiveral will be our new Vice President Technical and will be primarily working with our Technical Topic presenters as well as other duties. Please read all of our board member articles for more on their introductions and what to look forward to in the upcoming season!

...continued

On other news, I attended the 2022 Mid-Atlantic Leadership Conference on August 26th together with the presidents and representatives of the DC, Richmond, Blue Ridge, and Hampton Roads, as well as our Region 1 director, Donald Keith. We met at The George Washington Hotel in historic Winchester, VA. This was a similar event to the Region 1 meeting, but by having a more local focus, more time could be devoted to topics important to our chapters. The Maryland-DC-Virginia market is very close-knit, despite its geographic distance. Our chapters have many of the same issues of how to reach more of our membership, selecting technical meeting format and topics, and gaining/retaining new AYPs.

Most of the area is covered by many of the same manufacturer representatives, so if our chapter members are our life blood, our affiliates will be the conduits to help us reach them. Many of the ideas brought to our table were helpful and I will try to implement as many as possible over the coming months. Of course, many of the programs that Baltimore already enjoys will now reach a wider audience as well!

All in all, the meeting was a success and I look forward to next year and to our upcoming season.



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INDIANAPOLIS // SEPTEMBER 16-21

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SPECIAL THANKS

ASPE Boston Chapter

Earlier this month, we were fortunate to join ASPE Boston Chapter (virtually) for their Technical Meeting. It was presented by Edward LaRiviere from Microdesk and focused on Revit and Revit workflows. It was both a great learning and networking experience.

We hope to have a few more of these joint ASPE meetings in the future. Please subscribe to the newsletter to hear about future events.

Coming Soon!

DATE:	September 28, 2022
TIME:	6:00PM - 8:00PM
PLACE:	Olive Grove Restaurant
TOPIC:	Laboratory Gas Design using the NIH DRM
SPEAKER:	Nikita Patel Sherman Engineering

Join us later this month for a presentation on lab gas design using the NIH Design Requirements Manual.

2022

Industry Night on the Terrace

REGISTRATION IS OPEN

Thursday, September 15, 2022
5:30-8:30PM

MCA-Maryland 3600 O'Donnell St.
South Tower – Suite 800
Baltimore, MD 21224

Industry Night on the Terrace is back again! Co-hosted by 13 construction trade associations, this annual networking event is one you don't want to miss. Join folks from all areas of our industry on the 8th floor terrace at Baltimore's historic Natty Boh Tower to take in the views, network and catch up with peers. Enjoy the evening with heavy hors d'oeuvres, drinks and entertainment.

You don't want to miss out on an opportunity to be a sponsor at the industry's HOTTEST NETWORKING EVENT of the year!
Click here to register.

Complimentary valet parking is also available.

Co-Hosting Associations:

- Maryland Associated General Contractors (AGC)
- American Subcontractors Association of Baltimore (ASA)
- The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
- American Society of Plumbing Engineers (ASPE)
- Building Congress and Exchange of Metropolitan Baltimore (BC&E)
- Commercial Real Estate Women (CREW) Baltimore
- International Facility Management Association Chesapeake Chapter (IFMA)
- Mechanical Contractors Association of Maryland (MCA)
- Maryland Center for Construction Education and Innovation (MCCEI)
- Maryland Society of Professional Engineers (MDSPE)
- NAIOP Maryland
- National Association of Women in Construction – Baltimore (NAWIC)
- U.S. Green Building Council Maryland Chapter (USGBC)

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BALTIMORE

Julian Chiveral, LEED AP BD+C
Vice President- Technical

Technical Report

Hello fellow ASPE enthusiasts! You may have noticed there's a new face on the technical report this month – that's me. My name is Julian Chiveral, and I am a mechanical engineer with Mueller Associates. My day-to-day includes plumbing and HVAC design for universities, museums, and historic preservation work. Before I was working with Mueller, I studied mathematics and mechanical engineering at the University of Maryland. As a former RA and current (self-appointed) social chair at Mueller Associates, I am looking forward to bringing my event planning experience to ASPE and working with industry leaders to soak up as much technical knowledge as possible!

We've got quite a few technical topics to look forward to this year, with experts presenting on booster pump sizing, natural gas design, RO/DI ultrapure water, sprinkler design, laboratory gas design, and two code review sessions from WSSC and VPMIA. Plenty to learn for everyone!

Our first technical presentation of the season will be presented by Niki Patel, EIT, MBA. Niki is involved with ASPE as our AYP Liaison and is a sales engineer for Sherman Engineering, who specialize in vacuum and compressed gas services in medical and industrial applications. Her technical session will provide insight into laboratory gas design, using the NIH Design Requirements Manual as a guide.

The 2016 NIH DRM has been widely used as a resource for designing laboratory gas systems in government funded projects. In an industry that doesn't have a clearly defined code, it quickly became an invaluable resource on equipment design and sizing. Today, the DRM is used as the guide spec for NIH and FDA funded jobs, as well as a general guide for labs working in BSL2 or greater containments.

There isn't a topic untouched within the DRM with separate sections for materials of construction, piping, brazing and assembly methods, even testing and certification. With so much information covered in the guide, Niki is going to focus on three sections: Compressed Gas and Cryogenic, Laboratory Vacuum Systems, and Veterinary Medical Gas Systems for Animal Research Facilities. If you are involved with laboratory design, this is a presentation you don't want to miss!

Finally, if you have any suggestions for technical topics you'd like to see in the future, or events you'd want to attend, or maybe you just want to tell me about a new product line, let me know! As a chapter board member, I'm here to help improve your ASPE experience, so tell me what you want to see.

Tech Corner

Written By: Nikita Patel, EIT, MBA

Disclaimer: The views and opinions expressed are my own, and do not necessarily reflect the views and opinions of the National Institutes of Health. This document is intended to provide a brief summary of the Sections 12.3, 12.4 and 12.5 of the NIH DRM. For complete information, please refer to the NIH Design Requirements Manual.

Introduction

The National Institutes of Health (NIH) is a branch of the Public Health Services that operates labs across the US devoted to research into all forms of health issues, including some of the most dangerous and infectious pathogens. The Division of Technical Resources (DTR) maintains state-of-the-art knowledge and develops new technologies to improve energy efficiency, maintenance and operations. Within this division, the Office of Research Facilities (ORF), is credited for developing and enforcing national and international standards that ensure high quality facilities.

One such standard is the NIH Design Requirements Manual which 'establishes policy, design requirements, standards and technical criteria for use in planning, programming, and designing NIH owned, leased, operated, and funded buildings and facilities'1. In 2016, the NIH released the current edition of the DRM, which was a major improvement from the 2008 edition, with major restructuring, reorganization, and much more information for use by specifying Engineers.
Not only is it used for NIH designs, but also it serves as the foundation for laboratory design for many other large organizations such as the Center for Disease Control and Prevention (CDC), Food & Drug Administration (FDA), private laboratories, universities, etc. While this does serve as the most complete design specification for the NIH, these other organizations can choose to use all or part of it.

Although it is a very comprehensive document detailing requirements for a variety of Engineering disciplines, this month's presentation (and this article) will focus only on three main sections: compressed gas and cryogenic supply systems, laboratory vacuum systems, and veterinary medical gas systems. Each of these sections can be found in Section 12: Process Piping.

Compressed Gas and Cryogenic Systems

Compressed air is considered a critical service and shall be designed and arranged accordingly. There are three defined categories of air: Laboratory Air, Control Air/Instrument Air, and Pharmaceutic Air. The minimum requirements for compressed air are noted below*. Point of use filtration can be used for higher purity requirements.

Particles	ISO 8573.1, ISO 8573.4 (2010) Class 2
Pressure Dew Point	ISO 8573.1 (2010) Class 3
Hydrocarbons	ISO 8573.1 (2010) Class 2
Gaseous Contaminants	Controlled by air intake placement, equipment type and materials of construction

Certain NIH locations have a central utility plant that produces and distributes air to each building at a pressure range of 100-120psi. In-building compressed air systems shall be capable of supplying 100% of the system peak demand. A minimum of two compressors shall be used to provide N+1 redundancy. For larger systems, a triplex arrangement (50/50/50%) is recommended. A stainless steel ASME coded wet air receiver shall be provided downstream of the compressor after-coolers. Although a similar dry air receiver is recommended, the use of an epoxy coated receiver is acceptable downstream of desiccant dryers if there are no high cleanliness requirements.

Tech Corner, cont'd

Written By: Nikita Patel, EIT, MBA

Disclaimer: The views and opinions expressed are my own, and do not necessarily reflect the views and opinions of the National Institutes of Health. This document is intended to provide a brief summary of the Sections 12.3, 12.4 and 12.5 of the NIH DRM. For complete information, please refer to the NIH Design Requirements Manual.

This section also addresses compressed gases and compressed gas generation equipment, cryogenic fluid systems and associated bulk supplies used for laboratory gas, control air, and specialized fluid applications. Supply requirements are broken into three categories**:

1. Primary Supply
    a. Central, bulk cryogenic system: 3 weeks consumption + 20%
    b. Local, dedicated area system: 2 weeks consumption + 20%
2. Secondary Supply
    a. Central, bulk cryogenic system: 72 hours + 20%
    b. Local, dedicated area system: 2 weeks + 20%
3. Tertiary/Reserve Supply
    a. Local, dedicated area system: 72 hours + 20% or 24 hours + 20%

All installations shall conform to NFPA 55 standards. Automatic monitoring is required for carbon dioxide, liquid nitrogen, compressed air systems and any other critical systems identified by the program use group. Refer to Tables 12.3.1(A) and 12.3.1(B) for minimum alarm requirements.

When selecting materials and gas purity, specifying Engineers should provide at least Grade 4 (99.99%) for any lab applications. Beverage grade (99.9%) carbon dioxide shall be utilized as a minimum. Refer to Section 12.3.W for Testing, Qualification, System Verification, and Cleanliness Procedures.

Laboratory Vacuum Systems

Specialty applications required for lethal, toxic, or highly corrosive/explosive gas applications shall be locally applied systems. Applications requiring deep levels of vacuum shall also be locally supplied.

These laboratory vacuum systems shall be completely independent of medical applications***. Typical requirements for vacuum systems shall be 24inHgV at terminal locations and 26inHgV at the source pump. Due to the nature of the application, the primary central lab vacuum pumps shall be liquid ring technology with partial seal water recovery design. Alternate technologies, with the exception of a vertical screw pump, shall be justified by a risk assessment analysis.

Vacuum systems shall be provided in N+1 arrangement utilizing a variable frequency drive or multiplexing for energy efficiency. At a minimum, the vacuum system shall include controls for minimum run time, lead/lag pump, alternation, and operating status. Additional alarms shall generate a general fault alarm.

Inlet vacuum filtration is required upstream of the vacuum pumps.Filtration shall be provided in N+1 arrangement and must be a HEPA or sterilizing grade filter to ASTM F838 requirements. These filter housings shall be in stainless steel with decontamination ports.Filters must be monitored for pressure drop. The entire filter assembly shall be designed for less than 0.5inHgV pressure drop.

Tech Corner, cont'd

Written By: Nikita Patel, EIT, MBA

Disclaimer: The views and opinions expressed are my own, and do not necessarily reflect the views and opinions of the National Institutes of Health. This document is intended to provide a brief summary of the Sections 12.3, 12.4 and 12.5 of the NIH DRM. For complete information, please refer to the NIH Design Requirements Manual.

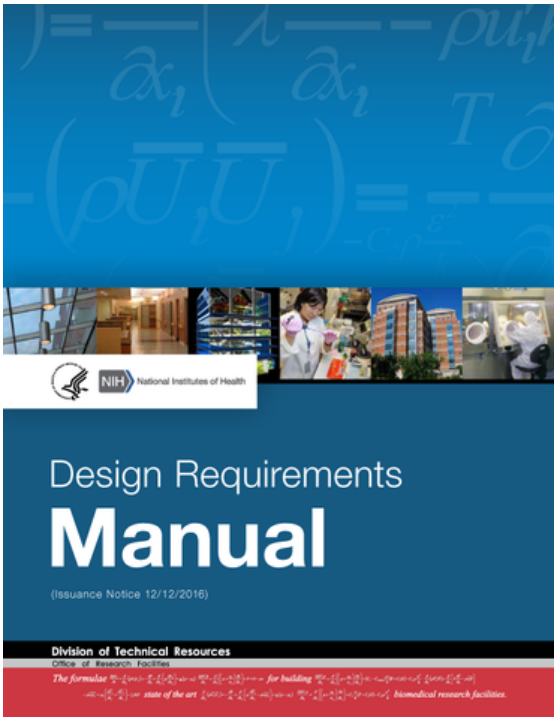
Veterinary Medical Gas Systems (VMGS) for Animal Research Facilities

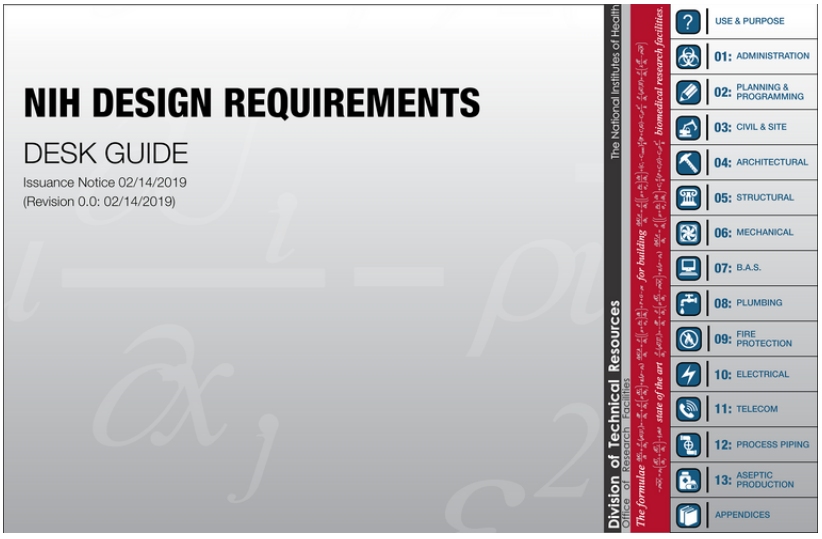
This section addresses compressed gas and animal systems within an Animal Research Facility (ARF). These systems shall not be shared with other lab or human medical applications.They may be located centrally or locally to serve program areas. Designers may find many similarities between this section and NFPA 99 Category 1 and ISO 7396-1 Systems. Gases used within this space that will not be utilized for veterinary medical applications need not comply with these requirements. At minimum, VMGS systems shall meet USP/NF grade purity, and the installation/certification procedures shall meet ASSE 6000 requirements.

Anesthetic gas scavenging systems, also known as waste anesthetic gas disposal systems, shall be required for all anesthetizing locations using halogenated agents or piped with nitrous oxide. Various system options are available for use, including: low vacuum, active systems, dual use systems (for existing systems only) or Venturi systems.

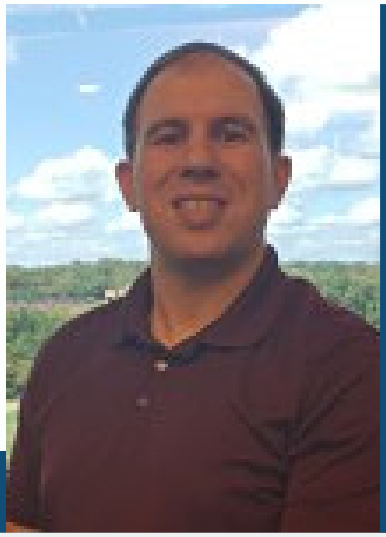
Focusing only on low vacuum systems, they must be N+1 central supply systems with continuous run regenerative blowers preferred. Additionally, liquid ring vacuum systems with seal recirculation are also possible with vacuum level control to low levels of vacuum. For all systems larger than 5HP in size, variable frequency drives shall be used with NFPA 99 type controls.

For more information on these three sections, please visit the NIH website to access this manual: https://orf.od.nih.gov/TechnicalResources/Pages/DesignRequirementsManual2016.aspx





This article serves to only summarize certain sections of the NIH Design Requirements Manual. The information provided is for general informational and educational purposes only and is not a substitute for project design sizing or specifications by a qualified Engineer.



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Chris Imhof, PE, CPD
Vice President- Legislative

Legislative Report - Final Results of 2022 Legislative Session

SB 0528 – Climate Solutions Now Act of 2022

- **Effective Date(s): June 1, 2022**
- Sets a statewide GHG reduction goal of 60% by 2031 and net zero by 2045. Also, establishes a building energy performance standard for buildings over 35,000 square feet, achieving a 20% reduction in direct emissions by 2030 and net-zero by 2040.

HB 0303 – Public Safety - Maryland Swimming Pool and Spa Standards – Adoption

- **Effective Date: October 1, 2022**
- Requires the Maryland Department of Labor to adopt by regulation the International Swimming Pool and Spa Code (ISPSC) as the Maryland Swimming Pool and Spa Standards; providing for the implementation of the Standards by the Department, local jurisdictions, counties, and municipalities; requiring the Department to consult with the Maryland Department of Health on the implementation of the Standards in relation to the regulation of the operation and maintenance of swimming pools and spas; and generally relating to the Maryland Swimming Pool and Spa Standards.
- The ISPSC has plumbing requirements for areas at pools.

HB 1052 – Public Safety – Gas Piping Systems – Construction Requirements

- **Effective Date: October 1, 2022**
- Prohibits the use of non-arc-resistant corrugated stainless-steel tubing (CSST) to be used in the construction of fuel gas piping systems in residential and commercial certain buildings; and generally relating to fuel gas piping systems.

HB 0806 – Building Standards and Emissions Reductions – High Performance, State, and Local Government Buildings, State Operations, and Eligible Projects

- Stopped at: Referral to Committee – House

SB 0871 – Accessory Dwelling Unit Authorization and Promotion Act

- Stopped at: Referral to Committee – Senate

SB 0854 – Graywater Systems – Public and Private Buildings – Authorization

- Stopped at: Referral to Committee – Senate

You can read the legislation by visiting the Maryland General Assembly website:

https://mgaleg.maryland.gov/

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Kathy Dwyer
Treasurer

Treasury Report

Welcome to 2022-2023 ASPE kickoff newsletter. We are all looking forward to a great year and many exciting topics.

I am happy to report our chapter is in solid financial position. We have had many supportive companies step up and advertise which is much appreciated. I hope you will support those who support ASPE. We have a new payment method right on the sign up for the monthly meetings so it will be easier for you to pay when you sign up!

The Olive Grove restaurant is still open so they will be ready with their yummy crab cakes and hospitality!

I look forward to seeing all of you soon!

100 YEARS Bradley

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NEW! Digital Mixing Valve Recirculation Stations

Key features

- Pre-assembled and tested recirculation system
- Navigator digital mixing valve
- Shutoff valves on inlets and outlets
- Temperature/pressure gauges on inlets
- Outlet setup and air purge connections
- Return line with circulating pump and check valves
- Easy installation and serviceability
- Electrical outlet
- Mounted to enamel-coated strut
- See technical data for available configurations

CircuitSolver®

A ThermOmegaTech® brand

The Need: DHWR systems need to be balanced to ensure that hot water is available throughout a building on every floor, at every fixture, at all times.

The Problem: A building typically requires multiple branches off the hot water supply line, and water flows in the path of least resistance which constantly changes in dynamic, open systems. Manual balancing valves and fixed flow devices rely on flow and pressure calculations and cannot respond dynamically to changing needs.

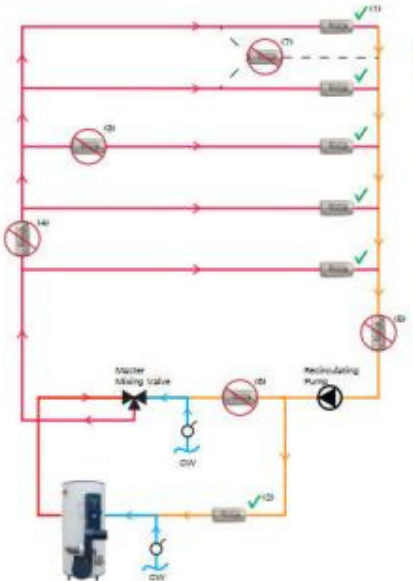
The Solution: Install a CircuitSolver® at the end of each branch, downstream of the last fixture, and the system balances itself.

How It Works: The thermal actuator at the heart of the CircuitSolver® modulates the valve between open and closed in response to changing water temperature. This continuous response to temperature variation enables each hot water branch to quickly and consistently direct hot water flow to where it is needed – No manual balancing required.

Note: The valve never fully closes, allowing a small amount of bypass flow to the return to avoid deadheading the recirculation pump.

CircuitSolver® Placement Do's and Don'ts

(1) ✓ at the end of each branch/riser
(2) ✓ in the return line back to the water heater
(3) ⊘ not in the middle of a branch/riser
(4) ⊘ not in a supply line
(5) ⊘ not in the return line
(6) ⊘ not after the recirculating pump
(7) ⊘ don't combine 2 branches/ risers



Valve Selection

Size: Select the size equivalent to the branch/riser feeding the return line.

Temperature: Select the set-point temperature equal to the desired return temperature.

Example: A standard CircuitSolver® installed on a 3/4" branch/riser with a 120°F return temperature would be CS-3/4-120.

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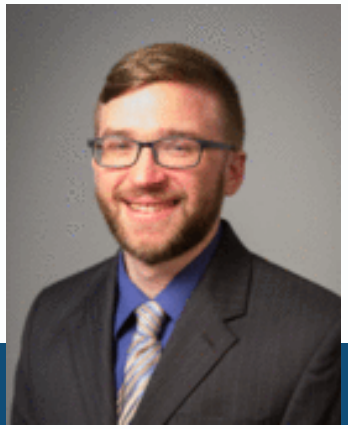

Brian Crisp, CPD
Vice President- Membership

Membership Report

Welcome everyone to another ASPE Calendar year! As Steve Harvey likes to say on one of my favorite shows, "we got another good for ya." We have another fantastic lineup of meetings this year, including some special non-monthly events for everyone to enjoy. I hope to see everyone at our meetings, participation in the meetings help to grow our plumbing community.

Baltimore is up to 114 members thanks in part to the folks below. It is great to see an influx of new blood, especially on the AYP (ASPE Young Professional) side. When I joined 12 years ago, we didn't even have the AYP group, so it's good to see young people becoming more involved (I'll be an AYP for the next years, so hopefully I can still say "young"). On that note, a special shout-out to Niki Patel, Baltimore's AYP Liaison. She has been a huge asset in coordinating with the ASPE AYP group nationwide and pivotal in growing our younger membership.

Please join me in welcoming these folks to our chapter, perhaps "buying" them a beverage at our upcoming meetings.

John Taylor – HPS Specialties (AYP)
Greg Anders – MidAtlantic RepSouth (AYP)
Bob Price – MidAtlantic RepSouth (AYP)
Justin Saelens – Mueller (AYP)
Joselito Lizardo – BKM

If you or anyone you know is interested in joining like the cool people above, or at least hearing about the benefits of membership, please don't hesitate to reach out to me. You can also join directly at https://www.aspe.org/join.

Thanks and see you at the meetings!

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Nikita Patel, EIT, MBA
(Region 1) AYP Liaison | Education Chair

AYP & Education Report

Welcome back to the ASPE season, I'm really excited for all we have planned after our Board Meeting in July, and also to represent our Baltimore Chapter at the upcoming ASPE Convention in Indianapolis.

Earlier this year we started a monthly lunch and learn program to provide '101' Basics topics to our AYPs. The crowds have spoken, and we will be picking that up again but on a once quarterly basis. If you have a topic you wish you knew more about, be sure to reach out to me with suggestions, or catch me at our upcoming meeting in September. I hope to have a few more in person activities this year, and perhaps even one joint event with both ASPE and ASHRAE Baltimore young professionals. We had a lot of fun at Five Iron Golf and the Autobahn, but this year's location is not finalized. Be sure to sign up as an ASPE member and for the newsletter to receive these updates as events are planned.

On a different note, I am excited to step into my new role as Education Chair and keep working with some of the programs Chris began, including Engineers' Week and the hands-on training at the Local 486. Although it is not entirely planned yet, I also hope to find new ways for our chapter to be involved in local Engineering curriculum programs—perhaps guest speaking at an Engineering or technical school, participating as judges for competition events, etc. Again, if you have any ideas, be sure to catch me at our next meeting!

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Hazardous Material - Asbestos Design and Construction Concerns

With the design, renovation and demolition of an older building, dating from the 1970's or earlier, one question that must immediately come to a mind is does the building or renovated spaces contain hazardous materials, including but not limited to asbestos.

Asbestos is toxic as its fibers, if inhaled over the long term, can cause lung cancer. A very brief exposure to asbestos fibers can cause a certain cancer called Mesothelioma.

The failure to plan for hazardous materials such as asbestos during design can produce major change orders, create a dangerous working environment, and create major project delays. If asbestos is discovered or suspected during construction all work will need to stop, testing shall be required, a remediation plan will need to be developed and the services of a specialty contractor obtained. Asbestos consultants, testers and contractors are not typically readily available and may have long wait times and expensive fees.

Asbestos has been around since the stone age but became mass produced during the industrial revolution. It was desirable as it was plentiful, inexpensive, had excellent insulating properties and was fire resistant. Even though the health concerns about it were known as early 1899, it continued to be manufactured and used in mass across a large number of industries until the late 1970s.

Concerning the plumbing, heating, ventilating and air conditioning (HVAC) and fire protection industries, asbestos is commonly found in pipe insulation, block insulation used in water heaters and boilers, and spray insulation used to insulate equipment such as air separators and expansion tanks and to provide fire protection to the building structure. Designers may also indirectly have concern for asbestos when holes need to be cut through floors, roofs, and walls as it was commonly used in building insulation.

The common practice of using asbestos stopped in the mid 1970's not due to health concerns or it being outlawed but rather because of litigation. The Environmental Protection Agency (EPA) attempted to outlaw and phase it out in 1989 but in 1991 the asbestos industry was successful in getting these guidelines overturned in federal court. It was not until the mid-1990's that Congress formally approved the phase out of asbestos under amendments to the Clean Air Act.

That being stated, the Clean Air Act only provided a phase out plan for Asbestos and it was still allowed to be used in low concentrations for insulation, insulation jackets, glues, and tapes well into the 2000's.

It is also important to note that there is no total ban on asbestos and when working in industrial jobs outside of the Plumbing, HVAC and Fire Protection industries, such as the automotive industry, that asbestos is still legal and commonly used.

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Schedule of Events

DATE	TOPIC	PRESENTER
SEPTEMBER 9	Enhance Revit Design to Increase Design Efficiency	Microdesk - Boston Chapter
SEPTEMBER 15	Industry Night on the Terrace	MCA
SEPTEMBER 28	Lab Gas Design Using the NIH DRM	Sherman Engineering - Nikita Patel
OCTOBER 26	RO/DI Systems	Canature Water Group
NOVEMBER 14*	Valve Material Applications	Jomar - Lauren Berenato
DECEMBER 14	Natural Gas Design	OmegaFlex
JANUARY 25	VPMIA Code Review	Amtron
FEBRUARY 19-25	Engineer's Week	-
FEBRUARY 22	Sprinkler Design	UMD - Ken Isman
MARCH 22	Fire Pumps	STH
APRIL 26	Booster Pumps	QuantumFlo
APRIL TBD	Annual Golf Outing	-
MAY 24	WSSC Code Update	WSSC - Chris Imhof
SUMMER 2023	Summer Holiday Party	-

**Please note, this meeting will be held on a Monday*

MONTHLY SPONSORSHIP OPPORTUNITIES

Tabletop Presentations: $100 to provide a tabletop presentation of equipment or material relative to the plumbing profession. The tabletops will be set up from the beginning to the end of the monthly meeting and provides the opportunity to provide a brief (under 5 minutes) presentation.

Please make checks payable to the Baltimore Chapter of ASPE. Contact Kathy Dwyer or Chuck Swope if interested