

Flashpoint

Philadelphia-Delaware Valley Chapter
Society of Fire Protection Engineers

VOLUME 16 ISSUE 6

JANUARY 2013

January Meeting Information

Date: Tuesday January 8, 2013

Place: Jacobs Engineering Group

Three Tower Bridge Suite 3000

Conshohocken, PA

See Page 6 for directions

5:30 PM: Fellowship Time

6:30 PM: Dinner

Dinner Program:

Mike Venneri will be giving us a presentation on Mass Notification. Mike will be giving us a different perspective on the requirements of this in NFPA 72.



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Cost: \$25.00 for dinner & program

Reservations: By 12 noon, Friday, January 4, 2013

Reserve with:

Shawn Sullivan of Jacobs Engineering by E-mail:

Shawn.Sullivan@jacobs.com

Or Bob Moser of Jacobs Engineering by email:

Bob.moser@jacobs.com

I think the links to email addresses has been fixed.

JCS

Future Cities Competition Nears



The Competition this year is Saturday January 26, 2013. SFPE has been a proud sponsor of this event. The regional coordinator is our own John Kampmeyer. The mission of the [National Engineers Week Future City Competition](#) is to provide a fun and exciting educational engineering program for middle school students that combines a stimulating engineering challenge with a "hands-on" application to present their

vision of a city of the future. Volunteers are still needed for judging the day of the event. If you can assist that day, please go to the [Future Cities Website](#) and fill out the volunteer form. There are 63 schools registered for the competition. If you have any questions, you can contact [John Kampmeyer](#).

Our chapter presents an award for fire protection, so please help if you can!

President's Spark by Jim Davidson P.E.

Happy New Year!!!

I hope that this Spark finds everyone recovering from a very merry and happy Holiday Season and have spent the holiday with the ones important to them.

Well, 2012 is gone and we await the adventures that 2013 will bring.

The past few years have been very tough on the construction industry, hopefully we will see a turnaround this year.

Some of the issues that fire protection engineers are going to need to address in the future are how to assimilate the discipline of fire protection engineering into the Owner's "Design Team" early enough in the design process. The inclusion of the fire protection engineer early in the design process permits the development of a systematic methodology to incorporate active and passive fire protection features in an economically feasible and technically sound manner. Another issue will be the commissioning of the building's integrated and interconnected fire protection and life safety systems to assure that they function correctly in time of need. The year of 2013 should prove to be interesting to all.

I would like to thank Mr. Ken Magsam, Senior Engineer, Burns Engineering for his presentation on "Fire Standpipes for Bridges". The presentation presented conditions that are not normally thought of with the "typical" standpipe system.

January's meeting is at Jacob's Engineering.

Please keep our service men and women who are far from home in your thoughts and deeds during this holiday season.

Because of the tragic event in Newtown, CT, please keep those who have been lost and those who have lost their loved ones in your thoughts and prayers.

I would like to wish everyone and their families a safe and Happy New Year!!!

Have a Fire Safe New Year!

"Be always at war with your vices, at peace with your neighbors, and let each new year find you a better man."

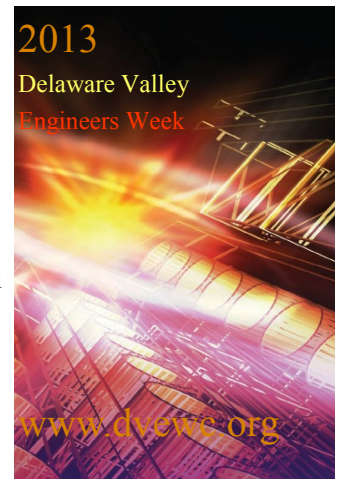
Benjamin Franklin

Respectfully submitted,

Jim

2013 Delaware Valley Engineers Week Events

The week kicks off with the Awards and Proclamation Luncheon at the Double Tree Hotel at Broad & Locust Sts. In Philadelphia on Friday February 15th. The Young Engineers Social is on Tuesday February 19th at the Fado Irish Pub & Restaurant at 1500 Locust Street Philadelphia. The Celebration of Engineering Reception is Thursday February 21st at Lethem Hall in Widener University, Chester, PA. You are welcome to join in these events to honor the Engineer of the year, Young engineer of the year and other award recipients. Check out the [Phila Engineers Club](http://PhilaEngineersClub.com) website.



FLASHPOINT

"The purpose of FLASHPOINT is to provide a forum for the transfer of information between members of the Philadelphia-Delaware Valley Chapter of the Society of Fire Protection Engineers (SFPE) and to give the Chapter visibility."

Newsletter/Publicity Committee:

Jay Stough

Information for publication can be submitted to: **Jay Stough**

Email: jays@tilleyfire.com

This Newsletter is published 9 or 10 times/year (September through June) and received as part of membership of the Chapter. Membership Dues are \$20.00 collected annually in the Fall of the Year. For an Application of Membership contact: **Bob Moser** Email: Bob.moser@jacobs.com

Visit our web site at:

www.sfpephiladelphia.org

Articles written are the views of the Author and not necessarily those of the Philadelphia-Delaware Valley Chapter of SFPE. ❖

Executive Board Meeting of October 2012

The Executive Board met before the October meeting and the following actions were taken:

- Approval of the September minutes
- Reviewed the treasurer's report and approved to be filed for audit at the end of the year.
- Mike Venneri updated us on upcoming speakers being planned.
- Bob Foraker is running the Networking Coalition Event for April 2013.
- Phil Gaughan updated us on the ASCET National Convention & Expo at the Valley Forge Casino in November.

- A new committee was formed to work on the website and get it up and running. The members of the committee are: Shawn Sullivan, Mike Venneri, Bob Moser and Jay Stough. The board approved a motion to work with Cloud Media Labs to get the website up and running for a cost of not to exceed \$1000.

Members present were Jim Davidson, Rick Coppola, Phil Gaughan, Dave Kriebel, Shawn Sullivan, Lou Annas, Ryan Shartle, Tony Ordille and Jay Stough.

NFPA-72 13- Most Significant Changes

The 2013 edition of NFPA 72®, *National Fire Alarm and Signaling Code*, builds on the scope and organizational changes made in the 2010 edition. This article briefly recaps these changes and provides a summary of new organizational changes. In addition, a number of significant technical revisions have been introduced, which will be summarized by chapter. This article by Lee Richardson is available at the [SFPE International website](#).

***“Let us live so
that when we
come to die
even the
undertaker
will be sorry.”
Mark Twain***

Challenges for the Fire Sprinkler Industry

There are a number of challenges that face people in the fire sprinkler industry. Many of these challenges are associated with the design of fire sprinkler systems. However, there are other important challenges facing the sprinkler industry that are of interest to fire protection engineers, but could not be classified as "design" issues. This article outlines challenges in the design, standards, specifications, maintenance and education arenas and will suggest methods of dealing with these challenges. This article by Kenneth E. Isman, P.E., FSFPE is available at the [SFPE website](#).

NFPA Announces 2013 Training Schedule

NFPA (National Fire Protection Association) has announced training available for the coming year. There is a varied list between conferences, seminars, webinars, self-guided online courses along with on-site course. They also offer certification course in Certified Fire Protection

Specialist (CFPS), Certified Fire Inspector (CFI) and Certified Fire Plans Examiner (CFPE).

If you need any continuing education units, there are many ways from NFPA to get some of these requirements. Check out their website for training at [NFPA/training](#).

Fire Effects on Steel Structures

Steel is a formidable material for building construction. Given its relative light weight and load-carrying capacities, it can be a good value for building designers. Modern high-rise and noncombustible buildings could not exist without steel. However, when steel is not protected by fire-resisting materials, one of steel's weaknesses is its performance under fire. (See Coffee Break Training FP-2010-1 for an illustration of spray-on fire resistant materials.) Steel's strength remains essentially unchanged until about 600 F (316 C). The steel retains about 50 percent of its strength at 1,100 F (593 C) and loses all of its capacity when it melts at about 2,700 F (1,482 C). However, for design purposes, it is usually assumed that all load-carrying capacity is lost at about 2,200 F (1,204 C).

Apart from losing practically all of its load-bearing capacity, unprotected steel framing can undergo considerable expansion when it is sufficiently heated. This is described by a **coefficient of thermal expansion**, typically represented by the symbol " α " and varies with the chemical composition of the steel. It is a measure of the change in length of a material in response to a change in its temperature. Materials expand as temperatures increase and contract with decreasing temperatures. The creep rate of steel is sensitive to higher temperatures and becomes significant for mild steel above 840 F (450 C). The thermal expansion can result in steel beams pushing supporting columns or walls out of alignment, increasing the risk of structural collapse.

Steel framing connections — where two steel elements are joined to form different geometry, such as the intersection of a column and floor beam — are the subject of additional consideration. The connections usually contain more material (additional plates, bolts, etc.) than the connected members (beams and columns). Connections often have less exposure to heat and possess higher capacity for heat dissipation because of their proximity to other members. Therefore, temperatures are likely to develop faster in beams and columns than in connections, making connections less critical for fire-protection design.

Copyright www.usfa.fema.gov/nfa/coffee-break/

John D Cook Scholarship Application Available

Applications for the annual scholarships given out by our chapter are due now. Although there is no set number of scholarships given each year, if there are enough qualified applicants, four have been given in a year.

At the January 23, 1975 Executive Committee Meeting, Harvey R. Searle recommended that the Philadelphia-Delaware Valley Chapter of SFPE establish an on-going project of educational assistance. A committee was formed to study his recommendation. During the July 15, 1983 Executive Committee Meeting, it was suggested that a percentage of the proceeds from the Smoke Control Seminar held April 27, 1983, be used to establish and maintain a Scholarship Fund. The first scholarship

would be awarded in memory of John D. Cook III. During the July 15, 1983 Executive Committee Meeting, it was suggested that a percentage of the proceeds from the Smoke Control Seminar held April 27, 1983, be used to establish and maintain a Scholarship Fund. The first scholarship would be awarded in memory of John D. Cook III. After several years of hard work, the benefits were realized when the Scholarship Committee chaired by Harvey R. Searle recommended to the Executive Committee that the first scholarships be presented in memory of John D. Cook III.

Applications are available on our website www.sfpephiladelphia.org

Engineers Club of Phila Updates

The Engineers' Club offers courses which meet the needs of many practicing technical professionals. In today's rapidly changing world, it is mandatory that engineers not only maintain, but continually increase both technical and management skills to remain on the cutting edge.

The Engineers Club has released their winter course offering. The website lists the course along with the Professional Development Hour (PDH) of each course. Pennsylvania does not approve courses. The New Jersey continuing education law requires that the NJ registration board approve

January 2013



Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 Happy New Year!	2 ASCET SJ chapter Mtg	3	4	5
6	7	8 SFPE Mtg. 6 PM	9 ASCET Delaware chapter Mtg	10	11	12
13	14	15	16 ASCET Berks chapter Mtg	17	18	19
20	21	22	23	24	25	26 Future Cities Competition
27	28	29 ASCET Phila chapter Mtg & ECP Luncheon	30	31		

Monthly Events

- January 2: New Jersey ASCET Chapter at the Collins House in Collingswood, NJ
- January 8: SFPE @ Jacobs Engineering
- January 9: Delaware ASCET Chapter @ Charcoal Pit on Kirkwood Highway in Wilmington
- January 16: Berks ASCET Mtg. Kutztown, PA
- January 26: Future Cities Competition @ Sheet Metal Workers Union Hall Columbus Blvd. Phila. PA
- January 29: Phila. ASCET Chapter @ Michael's restaurant Bensalem, PA
- January 29: Engineer's club of Phila. Luncheon Meeting @ Urban Engineers 530 Walnut St. Phila.





PHILA-DELAWARE VALLEY SFPE

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Mission Statement

The Philadelphia/Delaware Valley Chapter purpose is to advance the art and science of fire protection engineering and its allied fields, for the reduction of life and property losses from fire, to maintain high ethical standards on engineering among its members and to foster fire protection education.

Recognition of fire protection engineering as a discrete engineering discipline is a prime goal. Engineering disciplines exist because there is a special body of knowledge based on the fundamentals of mathematics, physics, chemistry, engineering science and economics.

The chapter strives to facilitate sharing of sound engineering experiences and knowledge between its members and the fire protection community in general with an active program of education and scholarship activities.

Directions to Jacobs Engineering

From **Central Philadelphia:**

Follow the Schuylkill Expressway (I-76) west to Exit 29 (Conshohocken). Stay in the center lane. At the traffic light, go straight and cross the Fayette Street Bridge. **At the next traffic light, turn right onto Elm Street. Go two blocks and turn right onto Ash Street. Three Tower Bridge is 1/8 mile on your right at the end of the street.**

From **Philadelphia International Airport and points south:**

North on I-95 to Exit 7. Follow I-476 North (toward Plymouth Meeting) to Exit 16. Follow signs for Route 23 Conshohocken. At the traffic light at the end of the off-ramp, turn right. Continue down road merging into the center lane. At the traffic light, go straight and cross the Fayette Street Bridge. Continue from bold text above.

From **Allentown and points north:**

Take the Northeast Extension of the PA Turnpike south to Exit 25A (Mid-County Interchange). Follow signs to I-476 South. Continue to Exit 16 (Valley Forge). On the off-ramp, follow signs to Route 23 Conshohocken. At the traffic light at the end of the off-ramp, turn right. Continue down road merging into the center lane.

At the traffic light, go straight and cross the Fayette Street Bridge. Continue from bold text above.

From **New York and Northern New Jersey:**

Take the New Jersey Turnpike south to exit 6 (PA Turnpike). Take PA Turnpike west to exit 25A (Mid-County Interchange). Follow signs to I-476 South. Continue to Exit 16 (Valley Forge). On the off-ramp, follow signs to Route 23 Conshohocken. At the traffic light at the end of the off-ramp, turn right. Continue down road merging into the center lane. Continue from bold text above.

From **points west:**

On the PA Turnpike, Take exit 24 (King of Prussia). Follow signs for I-76 east (toward Philadelphia). Take exit 28B (Plymouth Meeting). Follow signs for Route 23 Conshohocken. Continue from bold text above.

Jacobs Engineering Group, Inc.

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