

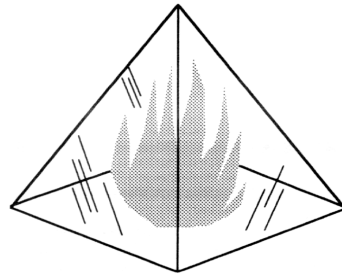
January 2014

Special points of interest:

- Check out the story on page 3 of the Iroquois Night Club fire 110 years ago! See what we have learned from it..
- If you have pictures of things wrong with fire protection systems, I am looking for items to do a "what's wrong with this picture" each month to help us see what is being done wrong and learn from it. I do not want names of installers or location of the picture, just what's wrong. You can email it to me at jays@tilleyfire.com

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Flashpoint

Philadelphia-Delaware Valley Chapter
Society of Fire Protection Engineers

January Meeting Information

Date: Tuesday January 14, 2014

Place: Jacobs Engineering Group
Three Tower Bridge Suite 3000
Conshohocken, PA

See Page 6 for directions

5:30 PM: Fellowship Time

6:00 PM: Dinner

Dinner Program:

Luke Connery, Global Product Manager with Tyco Fire Protection Products, will be speaking on the topic of water-based fire protection of industrial exhaust systems handling "extremely" corrosive environments, as defined by Factory Mutual. Luke will provide a brief overview of the fire problem, review key loss sta-

tistics from FM, discuss the results of an FM research study and pilot test in which several manufacturers participated, and provide an overview of Tyco's newly launched DDS Duct Deluge System.

Cost: \$25.00 for dinner & program

Reservations: By 12 noon, Friday, January 10, 2014

Reserve with: Jeff LaSalle by E-mail: jasalle@lasalleeng.com
or Fax: (215) 658-1772 ❖

Future Cities Competition In January

We have been supporting this endeavor for many years and hope that there are people available to help. The competition is Saturday January 25, 2014. John Kampmeyer Sr. is a large part of the steering committee. Our chapter provides an award for fire protection. Help is needed on the day of the event. To get more information contact Jennifer Wetzel via email: volunteer2014@futurecityphilly.org. If you want some first hand information talk to our own Rick Coppola or Phil Gaughan, as they have been volunteering at the event for a number of years. Check the website for more information: <http://www.futurecityphilly.org/>. So mark your calendar and see what the youth know about engineering!



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 \$30.00 collected annually in the Fall of the Year. For an Application of Membership contact: **Jeff LaSalle**

Email: jasalle@lasalleeng.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. ❖

Spring training is only seven weeks away! Who was the pitcher with the most wins in the decade of the 1960's?

(See page 5 for answer)

President's Spark by Mike Venneri PE

For one of the few times ever, the weather forced us to cancel the December meeting as you all well know. It turned out to be not so bad as predicted, but with the Schools closed and the forecast, it is always better to err on the side of caution. Hope everyone has had a wonderful Christmas so far and the same as we enter into the New Year. I am sure we have all heard way too often that New Years is a time to start something new and also to end some of those things that we may do that we are not so happy we do. It is true. However, every single days brings us that same opportunity to start something new and to end something old. So don't wait until the turn of a new year to do something you can do the very next day. Wishing everyone a Happy New Year for 2014 and hope it is prosperous for all. Hope to see all of you at the January meeting.

Michael P. Venneri, P.E., SET, CFPS

The SFPE Blog Has a New Look

The SFPE blog (<http://blog.sfpe.org>) now has a new look and format. Specifically, the blog format was changed to the Wordpress.com blogging service, which provides more flexibility to post better blog content. This includes better ways to promote our blog posts through numerous social media outlets and on the internet. It will also provide us with better data on the number of visitors to our blog. As such, SFPE can provide blog posts that are interesting to our subscribers. If you are not a subscriber, you can do so by going to blog.sfpe.org and using the "Subscribe to Blog via Email" form on the right side of this page. Or you can subscribe using an RSS feed reader (e.g., Feedly) and add <http://blog.sfpe.org> to your RSS feed list.

The Engineer's Club of Philadelphia

DREXEL UNIVERSITY GERRI LEBOW SCHOOL OF BUSINESS BUILDING (PRESENTATION AND TOUR) - January 16

The 12-story, 177,500-square-foot home for LeBow College of Business establishes a new gateway into the heart of the Drexel University campus. It is located at the intersection of Woodland Walk and Market Street (3220 Market Street). The building makes both an architectural statement and furthers and engineering ethos of sustainability, reliability and sophistication. Our tour will feature a presentation by John Ververelli, PE and President of Dmitri J. Ververelli, Inc., the lead MEP engineers for the project. John will discuss some of the energy conscious and conserving features of the building. The building is a Green Globes certified project attesting to its sustainability objectives and continuing Drexel's application of the Green Globes rating system on its campus projects. The agenda for the evening is 5:30 pm - Networking and Light Dinner; 6:00 pm - Overview and Technical Presentation; 6:30 pm - Tour; 7:15 pm - Continue Networking and Dinner. [More Information](#).

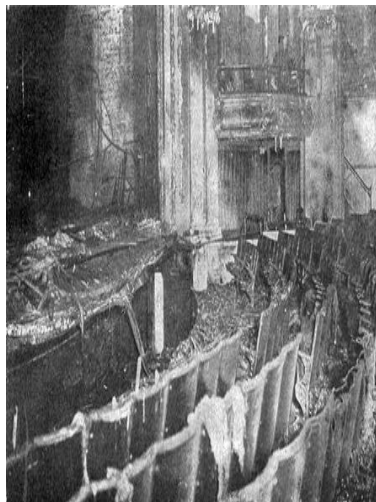
DELAWARE VALLEY ENGINEERS WEEK EVENTS

The three DVEW events to celebrate Engineers Week are:

[Awards Luncheon](#), Friday, February 14, 2014, DoubleTree by Hilton, Philadelphia
[Young Engineers Social](#), Tuesday, February 18, 2014, Manayunk Brewery, Philadelphia
[Celebration of Engineering Reception](#), Thursday, February 20, 2014, Villanova University Conference Center, Radnor, PA

Looking back 110 years ago - Iroquois theater fire kills 602 people

A fire at the Iroquois Theater in Chicago on December 30, 1903, killed 602 people and injured 250 others. It remains the fifth deadliest fire in U.S. history and the deadliest U.S. theater fire ever. The investigation showed that the fire was sparked by an arc light which ignited scenery curtains. An asbestos fire curtain was dropped on the stage, but was snagged on the way down and stopped about 10 feet above the stage, which allowed toxic smoke and flames to flow into the auditorium. Many deaths were due to crowd-crush, and the fire was brought under control in about 15 minutes by firefighters.



The fire alerted the country to the need for improved fire safety regulations in theaters. But for those who were there, it was a horror they could never forget. Read "[A Tragedy Remembered](#)" from the July/August 1995 issue of NFPA Journal®, which includes an eyewitness account from Eddie Foy, one of the actors performing on that fateful day.

Taken from the NFPA Website. Visit www.NFPA.org for more information.

*"Loyalty to the country always. Loyalty to the government when it deserves it."
Mark Twain*

Fire safety challenges of tall wood buildings examined

A new report has just been published, titled "[Fire Safety Challenges of Tall Wood Buildings](#)" and authored by Robert Gerard and David Barber with Arup North America Ltd. Recent architectural trends include the design and construction of increasingly tall buildings with structural components comprised of engineered wood referred to by names including; cross laminated timber (CLT), laminated veneer lumber (LVL), or glued laminated timber



(Glulam). Construction is currently underway on a 10-story apartment building in Melbourne, Australia, with taller structures up to 30 stories under design in Norway, Austria and Vancouver. These buildings are cited for their advantages in sustainability resulting from the use of wood as a renewable construction material. Claims have been made that they are designed to be safer than buildings fabricated using structural steel due to the formation of an insulating char layer that forms on the perimeter of a laminated wood beam when exposed to a fire.

The [Fire Protection Research Foundation](#) initiated this project to gain an understanding of the performance of these buildings under credible fire scenarios to ensure the safety of the occupants to emissions and thermal hazards, as well as the property protection of the building and nearby structures. The goals of this first phase project was to gather information and data from relevant studies and analyze the knowledge gaps. In addition, a framework prioritization of research needs was produced.

Read the [entire report](#) through the Foundation website.

Taken from the NFPA Website. Visit www.NFPA.org for more information.

If you have not paid your dues, please send them to John Spitz c/o Oliver Sprinkler. The form is on the website.

Notes from the Membership Chairman

Happy New Year to all our members and friends!

As we enter 2014 with our respective personal and professional resolutions, I would ask that each of us consider more active participation in the SFPE PDV Chapter by helping a committee this year. I recall a meeting many years ago at which the late Phil DiNenno advised us of the importance of active participation to the collective growth of our profession. Phil called especially for the younger engineers in the audience to be involved, before commitments to family and children become overwhelming.

I echo his comments here, as someone who chose to be a coach, teacher, and fully involved parent. Trust me, it didn't leave time for much else. But, not wanting to completely lose touch with the chapter, I helped on the Scholarship Committee throughout those years. It was one way I felt I could stay involved, in however limited a role.

So, I urge you to join a committee. This an inexpensive and easy way to meet local experts, learn more about the profession, and provide a valuable service to our Society. If you have an idea for a program you think might be of interest to us, or if you're a member of another professional society and you think a joint meeting would be a good idea, please contact Bob Moser at Bob.Moser@jacobs.com. Bob would be grateful for the ideas, and if it can't get on the schedule this spring, it could be put on a list for future meetings. And, just like that, you've helped our Chapter.

Best wishes for a successful 2014.

Have a Fire Safe Day,

Jeff

Jeffrey LaSalle, PE, CFEIe information.

Victaulic Issues Service Bulletin

If your sprinkler system contains a Victaulic FireLock NXT® Device (Series 768 or 769) and the system is installed in an area where the water supply conditions are such that calcium or other mineral deposits could develop, you need to inspect the current conditions of the actuator for restriction of the air feed and auto vent openings. The minerals present in the water may accumulate and cause a delay or an inoperable condition, preventing proper function of the sprinkler system.

If you own or service a Victaulic FireLock NXT Series 768 Dry Valve, click [here](#) to read a technical service bulletin.

If you own or service a Victaulic FireLock NXT Series 769 Deluge or Preaction Actuated Valve, click [here](#) to read a technical service bulletin.

For more information contact:

1-855-861-1227 (within the US)
engineering@victaulic.com (for US and all international inquiries)

Resources

[Victaulic FireLock NXT Series 768 Dry Valve TSB](#)
[Victaulic FireLock NXT Series 769 Deluge or Preaction Actuated Valve TSB](#)

[I-768 Installation, Maintenance and Testing Manual](#)
[I-769 Preaction Valve Series Installation, Maintenance and Testing Manual](#)
[I-769 Deluge Valve Series Installation, Maintenance and Testing Manual](#)

Position Available

LaSalle Engineering seeks a motivated Senior Fire Protection Engineer to join our firm. The candidate will assume a leading role in managing projects and clients; will provide technical expertise to building owners, architects, and other clients; and will assist in mentoring younger staff.

Candidates should possess 10+ years of progressive responsibility in project engineering and code consulting. A PE license is required, as is a Bachelors or higher degree in engineering (Fire Protection preferred).

Please email Jeff LaSalle at jl@salle@LaSalleEng.com if interested.

“What the New Year brings to you will depend a great deal on what you bring to the New Year.”

Vern McLellan

The scholarship

committee is looking for applicants for the annual scholarships handed out in May. The application and instructions are on the website at

www.sfp Philadelphia.org. If you have any questions, contact Dave Kriebel at dave.kriebel@gsa.gov.

Pass the word to anyone you know that might be eligible.

Piglet:

“How do you spell love?”

Pooh:

“You don’t spell it, you feel it.”

Fire effects on Steel

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.

In the building codes, structures erected of noncombustible construction often are permitted larger “allowable areas”^{*} than similar occupancies in combustible buildings. Generally, this is because the noncombustible character of the structural elements does not add any fuel to a fire. However, noncombustible construction – especially if it is not protected by fire-resistant membranes, spray-on material or automatic sprinklers – is highly susceptible to catastrophic failure when exposed to heat from a fire in combustible contents.

Reference: <http://www.usfa.fema.gov/nfa/coffee-break/>

Road Rules for Rush Hour

Rush hour commutes can be a major time-waster. Here are a few tips to save time and avoid getting stuck in traffic:

1. **Go Left at Tolls.** Trucks and other big vehicles have to go to the right booths and often take longer to get thru.
2. **Leave a half hour early or late.** Try leaving at 6:30 or 8:30 a.m., instead of 7 or 8 a.m. Experts say that’s all the difference you need to avoid big congestion during peak commute times.
3. **Check the traffic.** Radio and television often provide updates, but you have to wait for that information. So try logging on to a traffic website like <http://philadelphia.cbslocal.com/traffic/> or <http://www.myfoxphilly.com/category/234120/traffic>.

JANUARY 2014

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

Inside Story Headline

- January 8: New Jersey ASCET Chapter at the Collins House in Collingswood, NJ
- January 14: SFPE @ Jacobs Engineering
- January 15: Delaware ASCET Chapter @ Charcoal Pit on Kirkwood Highway in Wilmington
- January 21: Berks ASCET Mtg. Kutztown, PA
- January 25: Future Cities Competition @ Sheet Metal Workers Union Hall Columbus Blvd. Phila. PA
- January 28: Phila. ASCET Chapter @ Michael's restaurant Bensalem, PA
- January 29: Engineer's club of Phila. Luncheon Meeting @ Urban Engineers 530 Walnut St. Phila.

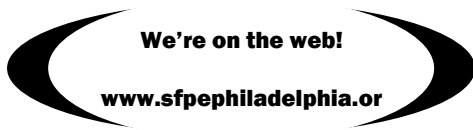
The pitcher with the most wins in the 1960's was Juan Marichal of the S.F. Giants with 191 wins!



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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.

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