National Fire Sprinkler Magazine

The Flagship Publication of The National Fire Sprinkler Association

May – June 2019 No. 214

Why Does NFPA 25 Ignore NFPA 13? pg. 31

NFSA Member Plays Major Role in Washington State Tunnel Project pg. 96

How NFSA's Social Networks Continue to Thrive After Ten Years pg. 91

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NFSM (ISSN 1050-4958) (USPS 524-010) is published six times a year (February—April—June—August— October—December) by the National Fire Sprinkler Association, Inc., 514 Progress Drive, #A, Linthicum Heights, Maryland 21090.

Telephone: (443) 863-4464. Subscription free to all NFSA members and member companies.

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Second-Class postage paid at Mahopac, NY.

POSTMASTER: Send address changes to NFSA, 514 Progress Drive, Suite A, Linthicum Heights, Maryland 21090



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FEATURES

- 29 Home Fire Sprinkler Day Aimed at Sparking Greater Use of Sprinklers By Lorraine Carl
- 31 Why Does NFPA 25 Ignore NFPA 13? By Bob Upson, P.E.
- 35 UL Issues First Certification for Trace Heating Equipment for Use on Fire Sprinkler Branch Lines By Kerry M. Bell

37 2019 BUYER'S GUIDE

- 79 Do Fire Sprinklers Really Save Lives and Property? By Rachel Moreno
- 80 Protecting Data Centers with Inert Gas and Acoustic Nozzles By Derek Sandahl, Global Product Manager, Engineered Systems, Johnson Controls
- 83 The Value and Consequences of 'Disruptive Innovation' By Dave Molnar, VDC Special Projects Manager, Victaulic
- 86 Home Fire Sprinkler Incentives: Bridging the Knowledge Gap Between AHJs and Developers By Peg Paul
- **96** NFSA Member Plays Major Role in Washington State Tunnel Project By Suzanne Mayr, Northwest Regional Manager

DEPARTMENTS

4 Calendar

- 7 From the President's Desk by Shane Ray Buy NFSA
- 9 From the Chairman's Desk by Kent Mezaros A look back

11 Contractor's Cue

- 13 Technically Speaking Top Tech 2019 by Mark Hopkins, P.E. Who, Where and When?
- 16 Codes Corner Jeffrey M. Hugo, CBO Words that Start with Draft

20 New Members

- 25 Notes from the Fire Scene by Vickie Pritchett What Used to Be
- 27 ITeM by Vince Powers Inspection Testing and Maintenance Automated Technology
- 91 Social Scene by Joanne Genadio How NFSA's Social Networks Continue to Thrive After Ten Years
- 98 HQ News
- 94 Chapters in Action
- 95 Members in Action
- 99 SON
- **102** Regional Roundup



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5/7/2019 Sprinkler System Plan Review
5/8/2019 Understanding, Applying and Enforcing NFPA 13D
5/0/2010
Understanding, Applying and Enforcing NFPA 13D Conshohocken, PA
5/8/2019 Understanding, Applying and Enforcing NFPA 25 CA Edition
5/23/2019 Design Advantage (AIA)
5/30/2019
Design Advantage (AIA)
7/30/ 2019 Sprinkler System Plan Review
8/1/ 2019 Rough and Final Inspections
5/9/2019 Understanding, Applying and Enforcing NFPA 13D
6/5/2019 Sprinkler System Plan ReviewLas Vegas, NV
6/17/2019 Pumps for Fire Protection
6/18/2019 Rough and Final InspectionColorado Springs, CO
6/19/2019 Understanding, Applying and Enforcing NFPA 25Colorado Springs, CO
6/20/2019 Hydraulics for Fire Protection
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Fire is fast. Fire sprinklers are faster.

From the President's Desk Shane Ray

Buy NFSA

he NFSA has promoted and represented the entire fire sprinkler industry since 1905. This edition of National Fire Sprinkler Magazine includes our *Buyers Guide*, which is for members only, and the announcement of our award recipients and Hall of Fame inductees. We want to promote our members to our members and the *Buy NFSA* campaign to encourage investing in one another. Investing in one another invests in the industry. The more successful our members, the more successful the overall industry, because they invest in NFSA and the overall promotion and representation of the entire fire sprinkler industry.



Why all the above and why the title *Buy NFSA*? Are we selling? No. Are we having trouble with revenue diversity? No. Are we trying to be the United States Chamber of Commerce? Conceptually. *Buy NFSA* will be a campaign to encourage mem-

"Buy NFSA will be a campaign to encourage members to support members. It will be a campaign to encourage outside groups to buy into our information. It will be a campaign to encourage everyone to recognize the National Fire Sprinkler Association as having the reputation of 114 years of dedication and commitment to improving, enhancing, maintaining and defending the fire sprinkler industry.

bers to support members. It will be a campaign to encourage outside groups to buy into our information. It will be a campaign to encourage everyone to recognize the National Fire Sprinkler Association as having the reputation of 114 years of dedication and commitment to improving, enhancing, maintaining and defending the fire sprinkler industry. An Association with members and staff, from past to present, that represent the best of professional, integrity and quality in the industry is a brand and reputation to promote that people and companies trust.

Revenue that goes into an association that has active and engaged members involved in all facets of its operation and its issues will result in more successful outreach. Combine this with a dedicated and committed staff that wakes up every day focused on utilizing the revenue, expertise, and input of our members to grow a stronger industry. Add to this the value of an association with the reputation to represent the industry, and that people outside the industry look to us as the pillar of professionalism, and the quality of products with excellence, this is the NFSA you see today.

Does the NFSA logo and brand matter? Absolutely. If you answer that question without a passion that it does, you aren't familiar with the history of the NFSA or you may question the overall value of any association. Members supporting members, and doing it in a manner focused on advancing the fire sprinkler industry in compliance with all laws and regulations governing such will enhance the overall industry.

Speaking of the NFSA brand and the *Buy NFSA* campaign, the best part of serving NFSA is the people and the companies that make it up. At our Board of Directors meeting in Tucson, Arizona the award honorees and those inducted into the Fire Sprinkler Hall of Fame were announced. What a blessing it was that I knew and served with every award recipient and inductee into the Fire Sprinkler Hall of Fame. What an honor to introduce the Golden Sprinkler Award winner, Mr. Buck Buchanan, who has given so much of his career and personal life to this great industry. Buck was one of the first people I called when I arrived in Patterson, New York as the Executive Vice President and I continue to call upon him to this day. Speaking of firsts, the first NFSA Board meeting I attended was because I was helping with the Residential Committee. I was there because Fire Team USA was in full swing, and the plans for the IRC vote were underway. The person that gave so much to our residential effort was Fred Benn, who was Chair of the Residential Committee at the time and served on E&S for many, many years. Fred being recognized for the Russell P. Fleming Technical Service

continued on page 10

The National Fire Sprinkler Association Applauds the Class of 2019!





We hope you'll join us for the Awards Banquet and presentations: Friday, May 17, 6:00-10:00pm at the Omni Hotel in Nashville, TN

We salute the service, sacrifice, and dedication of each award recipient to "Saving Lives and **Protecting Property Through** the Widespread Acceptance of the Fire Sprinkler Concept." **Congratulations to you all!**

Golden Sprinkler Award Buck Buchanan

Russell P. Fleming Technical Service Award Fred Benn

Public Safety Leadership Award Vina Drennan

Hall of Fame Dennis Coleman Jim "JD" Dalton Wayne Gey **Barry Waterman**





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Fire is fast. Fire sprinklers are faster.

From the Chairman's Desk

Kent Mezaros

A look back...

s one who considers himself young (*today's 55 is definitely yesterday's 35, and it's in print so it has to be true*) I do find it inspiring that I have been alive for, and actually in the fire sprinkler business for, many of the industry innovations that we all benefit from using these days.

In taking a look back at the fire sprinkler industry, legend has it that Philip Pratt invented the first automatic fire sprinkler system in the early 1870s and Henry S. Parmalee installed the automatic fire sprinklers protecting his piano factory in 1874. In 1881, Frederick Grinnell improved Parmalee's design and patented the automatic sprinkler while inventing the glass disc sprinkler, who's technology



basically stayed with us for the next century. Fast forward to my introduction to the industry and it seems the whirlwind began.

I didn't arrive to the industry until the mid-late 1980s. While grooved couplings and fittings were readily being used at that time, they were still relatively new to the fire sprinkler industry. Many of the sprinkler fitters that I would deliver materials to each day would talk

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about how easy the industry had now become since they were only installing Schedule 10 sprinkler piping and no longer needed to hang and make up Schedule 40 pipe with threaded mains into screw fittings. Many of those older systems were equipped with 6" or even 8" piping and fittings. We still had the chain tongs and other massive wrenches in the shop that were necessary to use when making repairs or retrofitting some of the systems we were contracted to work on. Being a strapping 150 lbs. back in those days I remember struggling a tad to load a length of 4" pipe up into the rack on

our delivery truck, let alone having to walk up a ladder with a piece of 6" Schedule 40 pipe on my shoulder to land in a hanger and make into a fitting. How about making a thread onto that piece of pipe on a Rigid 300 machine and pipe stand?

In the 1970s, hydraulically calculated systems became recognized and started taking over for the pipe schedule design systems that had performed effectively for so many years. The industry researched and learned more about performance characteristics of fire sprinklers, response times, droplet size and their effect on fires. Introductions of plastics, including plastic packaging had dramatic changes on how fires would now need to be addressed. The available water flows and pressures available to buildings now had a significant effect on the pipe sizing within the building, and possible requirements of a fire pump.

There were probably less than a dozen different types of sprinklers that stocked our shelves when I first started some 30-plus years ago, and I venture to guess we stocked every sprinkler head in the industry that was used on a daily basis for the type of work we performed. Today, no doubt it would be virtually impossible to stock the hundreds that contractors use on a regular basis. From standard to quick response sprinklers, large-orifice sprinklers, ESFR, residential, dry-pendent and dry-sidewalls, and the list goes on.

Those of you that still have a tee-square or have used a Xerox vellum for a fire sprinkler shop drawing are probably as old as I am. AutoCAD, and the following sprinkler system computer aided design programs, became main-stream in the 1990s. Cut listing of materials were no longer done by hand. You could just print them out and fax them to the fabricator. I still vividly remember hand-listing a job and dropping it in the mail to send to our fabricator for pricing! Hand-performed hydraulic calculations went out the window as well.

continued on page 10

From the President's Desk

Shane Ray

continued from page 7

Award is well deserved, and I am glad to have served in a support role. Another person that has given so much to our advocacy efforts is our Public Safety Leadership Award recipient, Vina Drennan of Common Voices. It has been an honor to serve with and observe this dedicated and committed advocate. Vina has testified in New York City to ensure Trump Towers had fire sprinklers and she has keynoted some of the largest fire service conferences in the world, advocating for the cause and our mission.

The Fire Sprinkler Hall of Fame inductees have all touched my life and my career. Jim Dalton is the first, if it wasn't for him, I would have never met Wayne Gey. Wayne was one of the first to call me when the position of President opened up with NFSA, and was the first Chair of the Board to give the most advice to two of the most rookie personnel in the industry at the time. The first two Hall of Fame members I ever had the chance to call in my career with the good news on their inductions to the Fire Sprinkler Hall of Fame was Dennis Coleman and Barry Waterman. Dennis Coleman was the first official call from a NFSA Board member that I received when the search for a new president of NFSA began, without that call I may have still been in South Carolina. Barry Waterman reached out to me via e-mail and stated he was retired when I came aboard as President, but was at my first Illinois Chapter meeting. The Class of 2019 is well deserving, and I'm sure has touched us all. Congratulations to them.

It is with the heaviest of hearts that as I conclude this article, with the somber news that John Viniello passed away. (2-26-19) JAV, as many referred to him, gave 28 years of his life as the President of this Association, and loved the role and organization. I would randomly get an e-mail from JAV wanting me to push an issue harder and saying I was too soft, "take the gloves off" he would say. John Viniello hired and led many great people during his tenure and those people will continue his legacy.

The right board and the right staff is what makes NFSA all that it is, just as with the incredible companies that make up NFSA membership. It isn't about the person or the politics, it's about the cause and the campaign. We will win with *Buy NFSA* and our mission will win throughout our lives because it is pure.

May God Bless JAV, all those we have lost in this great industry, and each of you.

Shane Ray, *President*

From the Chairman's Desk

Kent Mezaros

continued from page 9

When someone visits our offices at Quick Response Fire Protection for the first time, I usually give them a tour and I enjoy pointing out the room in the front of the building that used to be the 'plan-review room'. I purchased our building from a General Contractor and for those of you old enough to remember that when you wanted to bid a project you normally would get in the car, drive to the GC's office, and sometimes wait in line to review a set of drawings in that room for a particular project you may be bidding. If addendums were released later, you would have to complete that process all over again – just to bid a single project! Today, we receive solicitations to bid along with PDF and DWG files via email, and never have to leave our desk to bid projects of virtually any size. Where it used to be a full-time job to bid a few projects a week, we can now easily accomplish the same in a single day.

The first edition of NFPA 13R was approved by the NFPA membership in November of 1988 and was released by the NFPA Standards Council in January of 1989. The adoption of subsequent building codes that referenced 1989 NFPA 13R further expanded the types of buildings (residential structures up to four-stories) that fire sprinklers would now be required to be installed in. CPVC piping and fittings were soon to follow which further allowed contractors cost efficient methods to protect these types of properties with fire sprinklers.

I've only begun to scratch the surface here in taking a peek at how dramatically our industry has changed. As you read this month's issue you will quickly be reminded of numerous other industry innovations. I encourage you to reflect back and think of some that have affected you and your business as well and take a moment to share them. I can be reached at kentmezaros@quickresponsefireprotection.com and as always, I look forward to hearing from you.

Respectfully yours,

Kent Mezaros, Chairman

How To Keep Your Team From Freezing Under Pressure

By Bill Stainton

First question:

Have you ever played poker? I mean real poker, with real money at stake.

Second question:

Have you ever been losing at poker, with real money at stake?

You play differently when you're losing than when you're winning, don't you? That's because there's more pressure when you're losing. And when the pressure's on-when the stakes are the highest-we tend to play more conservatively. We take fewer chances. In other words, we play not to lose, rather than play to win. It's human nature. When the pressure is the highest, we focus on what we might lose, rather than what we might gain.

The same dynamics that affect us at the poker table affect your team in the workplace. Professor Heidi Gardner, of the Organization Behavior Unit at Harvard University, found that in highpressure situations, teams get a sort of tunnel vision, focusing more and more on the risks of failure than rewards of success. Because of this, they fall back on safe, conservative approaches instead of coming up with original solutions. This is a problem because the safest course isn't necessarily the best course.

Now, let's be clear here. There may be times when the safe course is the best course. But how can you know that if you can't compare it with other options?

When your team freezes-when they default to safety and stop coming up with these options-then you're all basically saying, "The status quo is our best-and in fact, only-bet." And at this point, you've psychologically negated any possibility of a breakthrough solution, a solution that could move the situation forward rather than keep it frozen where it is.

So how do you correct this? How do you get your team-with real consequences on the line-to keep generating original solutions?

1. Let them know that options are valued

Create a culture of "two or more options for every challenge." Be clear with your team that only one option is not an option. Make multiple options a core team value and be consistent with it. When your team realizes that there is an expectation of "two or more options," they will start to generate those options.

CONTRACTOR'S CUE

2. Listen to everyone

Gardner also found that in high-pressure situations, teams tend to defer to the highest-ranking members. But the truth is that good ideas can come from anyone. So rather than just asking the senior members what they think, ask everyone. Sometimes the most junior member of the team will see something-a piece of information, a connection, a resourcethat everyone else has missed.

3. Play "What if?"

One easy way to generate creative ideas is to play "What if?" For example, ask your team questions like:

What if we had unlimited time to solve this problem?

What if we had to solve this problem with only \$100?

What if our competition were facing this problem and solved it? How would they have done it?

By asking these and other "What if" questions, you force both you and your team to think about the problem differently, which opens up the possibility of creative solutions that you wouldn't have seen otherwise.

It's no fun losing at poker. I know. I've been there. But-in that and other high-pressure situations- there's a world of difference between freezing and feeling helpless... and having options that could lead to a breakthrough solution.

About the author

For 15 years, Executive Producer Bill Stainton led his team to more than 100 Emmy Awards and 10 straight years of #1 ratings. Today Bill helps leaders achieve those kinds of results– in their world and with their teams. his website is http://www.billstainton.com

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Who, Where and When?

by Mark Hopkins P.E., NFSA's V.P. of Engineering

	NAME	ORGANIZATION	
1	John Allen	JCI / Grinnell Fire Protection Solutions	
2	Fred Blanchard	BCE Engineers, Inc.	
3	Steve Bouwman	BDR Services Limited	
4	Ryan Bowlby	Patriot Fire Protection, Inc.	
5	Ryan Brewer	Wayne Automatic Fire Sprinklers	
6	Kelsey Callow	Viking Fire Protection Inc.	
7	Vincent Como	Wayne Automatic Fire Sprinklers	
8	Michael Crawford	Wayne Automatic Fire Sprinklers	
9	Christopher Davis	Wayne Automatic Fire Sprinklers	
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47	Juan Vasquez	Wiginton Fire Systems	
48	Nathan Wager	J.F. Ahern Co	
49	Dan Wilder	Western States Fire Protection Co.	
50	Dustin Williams	Wayne Automatic Fire Sprinklers	
00			



Eligible contestants have been invited to participate in the next round of the **2019 Top Tech Competition** which kicked off last December. Nearly 150 contestants enrolled to compete in the preliminary examination round. This portion of the competition required contestants to answer multiple-choice questions and complete a practical layout question.

Once started, the contestants had one hour to answer a series of 30 questions related to NFPA 13-2016, NFPA 13D-2016, NFPA 13R-2016, NFPA14-2016, NFPA20-2016 and NFPA 22-2018. All qualifying contestants completed this on-line exam portion of the preliminary round. The questions ranged in complexity and required in-depth knowledge of these standards. Questions were randomly drawn from a large bank of questions specifically developed for this competition. In addition, the ordering of answers was also randomized to prevent the possibility of collaboration.

Over 100 contestants completed the practical layout portion of the preliminary round, which required contestants to download a layout question, sketch in the solution with supporting rationale, and upload the solution within one hour once initiated. Each contestant was randomly assigned a layout problem from a question bank. These problems were designed to include multiple steps to complete the layout(s) required. This portion of the preliminary round also helped to distinguish those eligible to move on to the next round since these questions offered an additional level of complexity. The scores have been tallied but will not be released. However, this exam proved to be challenging enough to establish a clear range of scores to identify contestants moving to the next round.

We are pleased to recognize the 50 technicians (*table to left*) that have be invited to participate in the next round of the competition in Nashville, Tennessee as part of the NFSA Conference and Expo. The names are listed in alphabetical order (by last name) and not intended to infer ranking in any way.

continued on page 14

continued from page 13

It is also important to identify that competition was tough. If you were not selected, do not be discouraged, sharpen your pencils in preparation for the 2021 competition. Kudos to all the participants that took this preliminary exam.

The **NFSA Conference and Expo** starts on Wednesday, May 15th and these contestants will enter the next round of the competition at 2:00 p.m. Contestants will take a second exam which will include a series of multiple-choice questions along with a series of practical layout questions to be solved.

Contestants should plan to be in the Top Tech exam room between 12:00 and 12:30 p.m. since they will need to register for both the Top Tech Competition and the NFSA Conference and Expo prior to taking the exam. At this time, each contestant will receive their information packets about the Top Tech Competition and other events. This exam portion of the competition will narrow the field to 18 contestants that will participate in a game show style competition in the Expo hall. Contestants that do not advance in the competition will be invited to participate in a poker run style competition with cash prizes. The names of the 18 qualifying contestants will be posted at the Opening Reception. This will be followed by six preliminary game rounds on Thursday, May 16th. Each preliminary round will include a bracket of three contestants. The schedule for these preliminary rounds is as follows:

Round 1:	12:30 p.m.
Round 2:	1:00 p.m.
Round 3:	1:30 p.m.
Round 4:	2:00 p.m.
Round 5:	2:30 p.m.
Round 6:	3:00 p.m.

All contestants are expected to be at the Top Tech stage prior to the start of Round 1. The winner of each preliminary round bracket will advance to the semi-final round. This portion of the competition will further narrow the field to 6 contestants com-



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continued from page 14

peting to be the Top Tech. Two semi-final rounds will be held on Friday, May 17th as follows:

Semi-final Round 1: 1:00 p.m.

Semi-final Round 2: 2:00 p.m.

Each semi-final round will include a bracket of three contestants. The two winners of these rounds will advance to the final round which offers a head-to-head battle to be Top Tech. This final round will also be held on Friday, May 17th as follows:

Final Round: 3:00 p.m.

The 2019 Top Tech will be awarded their prizes and bragging rights immediately after the competition concludes. The Top Tech will be announced at the Closing Awards Banquet for all to know.

Thank you to all contestants for participating in the Top Tech competition. And thank you to all companies for sending these contestants to compete in the competition. Without your involvement this competition would not be possible.

Congratulations to our 50 technicians remaining in the fight to be NFSA's Top Tech. We look forward to seeing you in Nashville for this exciting competition.

Please look for Roland Asp's article in the July-August edition of the *National Fire Sprinkler Magazine*. He will announce the 2019 Top Tech Winner and will provide a recap of the Top Tech competition events in Nashville.•





Words that Start with Draft

by Jeffrey M. Hugo, CBO, Director of Codes and Public Fire Protection



Private Benjamin Buford 'Bubba' Blue from the 1994 movie Forrest Gump, recited a litany of foods that contain the word "shrimp" such as, pineapple shrimp, lemon shrimp, coconut shrimp, etc. In the codes and standards world, there are a litany of words and assorted meanings that start with "draft", such as, draftstop, draft curtain, draftstopping, draft stop, and so on. Nearly every "draft" term is used in

multiple ways in each model codes and standards, but the intent is to limit the spread of smoke and air movement through a space by a passive measure, like a piece of sheetrock, glazing, or fabric. This article clarifies every use of this every day term in the 2016 edition of NFPA 13 and the 2018 edition of the International Building Code (IBC).

Draftstops in NFPA 13

A draftstop isn't defined by NFPA 13, but the intent is to limit the spread of smoke and air movement through a space by a passive measure. A draftstop is usually a piece of sheetrock, or oriented strand board installed full-depth or from bottommost portion of the space to the topmost to subdivide or compartmentalize the space. Draftstops are referenced in NFPA 13 in the following ways:

- Concealed spaces. Some concealed spaces, such as "I-joists" require joist channels to be draftstopped every 160-cu. ft. to be exempt from sprinklers. The material to draftstop can be equivalent to the joist or space. For example, an "I-joist" can be draftstopped with an "I-joist" installed perpendicular in the joist space to qualify for this exception. (8.15.1.2.8)
- Combustible soffits, eaves, overhangs, and decorative frame elements. Where sprinklers are exempt from these spaces, they are draftstopped, with a material equivalent to that of the soffit, into volumes not exceeding 160-cu ft. (8.15.1.2.18.3)

Draft curtains in NFPA 13

A draft curtain is defined by NFPA 13 (3.3.8) as, "A continuous material protruding downward from the ceiling to create a reservoir for collecting smoke and heat." Draft curtains are typically 18 to 24 inches in depth, descending from the uppermost portion of the ceiling or deck and are meant to bank heat to operate sprinklers. Because of the exposure to heat, a draft curtain is typically non- or

limited-combustible. The root of the NFPA 13 definition above comes from NFPA 204 which further describes a draft curtain as, "...a solid fixed obstruction, such as beam, girder, soffit or similar material..." Draft curtains are referenced in NFPA 13 in the following ways:

- ESFR separation. ESFR sprinkler systems are separated with 2 feet deep draft curtains from other systems with standard-response sprinklers. (8.4.6.4 and 12.1.1.3.1)
- Adjacent hazards. Adjacent hazards or different design methods of fire sprinkler systems and pilot line detectors are separated by a draft curtain. While the standard is silent on the depth of the draft curtain, it is understood to be a minimum of 2 feet deep. (8.4.6.4.2, 11.1.2, 12.3)
- Vertical openings. Unenclosed vertical openings, such as escalators, atriums, open staircases and other floor openings, are permitted to be protected with closely spaced sprinklers with a draft curtain. It is important to note, NFPA 13, in Section 8.15.4 uses the term "draftstop" here but the intent is more of the curtain style having a minimum 18 inch "fixed obstruction" descending from the ceiling material to bank heat in order to operate the closely spaced sprinklers. (8.15.4)
- Attic and concealed combustible space sprinklers. Some of the listed attic and combustible concealed sprinkler listings require draft curtains. The depth of these draft curtains varies from 12-inches to 1/3 of the depth of the space, depending on the listing installation criteria. Check the manufacturers installation criteria for each of these special sprinklers.

Draftstopping in the IBC and NFPA 101

The International Building Code (IBC) defines draftstop as, "A material, device or construction installed to restrict the movement of air within open spaces of concealed areas of building components such as crawl spaces, floor/ceiling assemblies, roof/ceiling assemblies and attics." Whereas the NFPA 101, Life Safety Code, Section 3.3.67, defines draftstop as, "A continuous membrane used to subdivide a concealed space to resist the passage of smoke and heat." Both definitions are describing a full height, full-depth and full-length material that prevents the flow of hot air and smoke through a structure. Draftstopping is not a fire-resistance assembly,

continued from page 17

and while penetrations, such as sprinkler piping, are not limited or protected, the openings in draftstopping, such as a door, are self-closing to maintain the integrity of the system to provide the intended protection.



Attic with sprinklers and without draftstopping

Draftstopping materials between the two model codes differ. The IBC draftstopping materials are:

- 1/2-inch gypsum board
- 3/8-inch wood structural panel (plywood, oriented strand board) or particleboard
- 1-inch nominal lumber
- Cement fiber-board
- Mineral wool or fiberglass batts or blankets
- Other approved materials that are adequately supported.

Draftstopping materials in NFPA 101 are:

- 1/2 in. thick gypsum board
- 15/32 in. thick wood structural panel
- Other approved materials that are adequately supported.

Draftstopping combustible concealed spaces, attics and sprinklers in the IBC and NFPA 101

Combustible attic and floor-ceiling spaces are subdivided in the IBC by draftstopping depending on the occupancy. Non-residential uses have floor/ceiling spaces draftstopped every 1,000 sq. ft and attics every 3,000 sq.ft. Residential floor/ceiling spaces and attics are compartmentalized with draftstopping in line with the fire partitions or in four-story (or less) R-2 attics, are draftstopped every 3,000 sq. ft or above every two units. An exception to installing draftstopping, in every occupancy, is an automatic sprinkler system where sprinklers are installed. This exception applies when the automatic sprinkler system is installed according to NFPA 13 or in the case of residential occupancies, NFPA 13R systems with sprinklers installed in the combustible space or attic. It is important to highlight three items concerning this topic here:



Draftstopping in attic

- 1. Fire sprinklers eliminate draftstopping, when installed in the space or according to the standard. The exception to physical draftstopping in IBC Section 718.3 and 718.4 states, "Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 (NFPA 13)" NFPA 13 requires sprinklers in concealed combustible spaces, but it has a few some exceptions. This can mean, on rare occasions, it is possible to have a combustible concealed space or attic without draftstopping and without sprinklers. Note, the exception language carefully, "Buildings equipped throughout...in accordance with 903.3.1.1" NFPA 13, through Section 8.1.1.1 is considered sprinklered throughout even with the few exemptions.
- 2. Buildings protected by a NFPA 13R system would need sprinklers in the combustible concealed space to eliminate draftstopping. IBC Section 708.4.2, Exception states,

continued on page 18

continued from page 17

"Buildings equipped...in accordance with Section 903.3.1.2 (NFPA 13R) provided that protection is provided in the space between the top of the fire partition and underside of the floor or roof sheathing, deck or slab above as required for systems complying with Section 903.3.1.1 (NFPA 13)."

3. It is not permitted by the IBC to allow draftstopping to eliminate fire sprinklers in the concealed space or attic. The IBC provides for a passive fire protection measure (draftstopping) to slow down air movement during a fire. The only time in the IBC or any other model code where passive fire protection is mitigated or eliminated, is with an active fire protection system (automatic sprinkler systems). Draftstopping is always required in combustible concealed spaces and attics and only fire sprinklers eliminate draftstopping. Never the other way around.

Similar rules for draftstopping of the IBC apply to several NFPA 101 occupancies. The type and thickness of the draftstopping materials are fewer (as pointed out above). However, the NFPA 101 text that eliminates draftstopping with fire sprinklers suggests fire sprinklers are installed throughout the space. NFPA 101, Section 8.6.11.2 states, "The requirements of 8.6.11.1 shall not apply where...the space is protected throughout by an approved automatic sprinkler system in accordance with Section 9.7." While the reference to (9.7) is applicable to NFPA 13, NFPA 13R and NFPA 13D systems, installing sprinklers in the concealed space to eliminate draftstopping is implied by 8.6.11.2. The comment in the NFPA 101 Handbook tends to support this by saying, "Where such spaces are protected with automatic sprinklers, the risk of unseen fires is minimized."

Draft curtains in the IBC and NFPA 101

The draft curtain criteria from the model codes to NFPA 13 doesn't differ all that much. The IBC defines draft curtains as, "A structure arranged to limit the spread of smoke and heat along the underside of the ceiling or roof." NFPA 101 doesn't have a definition for draft curtains and follows NFPA 13 by calling them "draft stops", which as explained above can be confusing to users of the codes and standards. NFPA 101 does make a very important statement in A.8.6.9.2 (3) on the installation by saying, "Draftstops protecting

vertical openings that are defined in the requirements of NFPA 13 are curtain style descending from the ceiling surface or plane." This clarifies that a draft curtain protecting a vertical opening with closely spaced sprinklers is meant to be an 18-inch "curtain style" and not a channel or trough cut into a ceiling. The draft curtain is meant to bank heat to open the sprinklers. Remember, the closely spaced sprinklers are eliminating a one-hour fire-rated enclosure.

 Escalators, exit access stairways, and convenience stairways, The IBC (Section 712.1.3 and 1019.3) and NFPA 101 (8.6.9.7) allows fully sprinklered buildings to replace the one-hour enclosure around the escalator, exit access and convenience stairs with an 18-inch draft curtain and closely spaced sprinklers.



Stair with draft curtain and closely spaced sprinklers

Draftstops and draft curtains have important functions in the model codes and standards. Active fire protection can further improve buildings by installing fire sprinklers to control and suppress fire. Fire sprinklers can eliminate draftstops in attics and fire sprinklers can eliminate a one-hour enclosures with draft curtains with closely spaced sprinklers. Knowing these features in both NFPA 13 and the IBC will improve building performance in fires, increase fire safety and provide designers and contractors the ability to decrease cost.•

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May 1-14, 2021 Cosmopolitan, Las Vegas, NV May 3-6, 2022 Sheraton Sand Key, *Clearwater Beach, FL*

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continued on page 22



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What Used to Be



by Vickie Pritchett, Director of Outreach & Government Relations

ur first commercial! I hope that by the time you read this article, you have been able to view the commercial and I hope you are helping us spread it via social media (*the easiest way for us to spread our message and reach people beyond our inner circle.*)

Working with our ad agency on this *rallying cry* campaign has been one of the most rewarding projects of my professional career. I thought I would take a minute to share the story behind *What Used to Be*, so that you'd have its background and vision for our cause. We all know fire sprinklers save lives.

The beginning part of our story with helping the ad agency understand fire sprinklers and how they work was to share a sideby-side demonstration. We wanted them to see a room with fire sprinklers and one without. It was amazing to me to watch this team react to what they witnessed. They were immediately drawn to the non-sprinklered side. The destruction that occurred in less than three minutes was the catalyst to the *Fire Sprinklers Buy Time*. *Time Buys Life* part of our campaign.

In their words, "When your home or apartment/condo is on fire, your immediate plea is for water to put the fire out. You know that because you know that the best way to extinguish a fire is to apply water. In that moment, you'd pay any price to have 'fastest water' and that's what fire sprinklers are!

Now, you all know that is music to our ears! That's exactly what we've been talking about, we've just never expressed it in that way.

Happy Innoversary Victaulic!

On April 4th, Victaulic celebrated a century of innovation–100 years since it was granted its first industry patent for mechanical pipe joining solutions. During this time, the company has developed and patented groundbreaking technologies with no signs of slowing down. Victaulic products have been used in some of the most notable landmarks in the world. These include the Hoover Dam, Eiffel Tower, Beijing Olympic Stadium, Petronas Towers, and the Hudson Yards.

With one billion installations under their belt, Victaulic has expanded from a small office in London to a workforce of 4000+ people throughout 37 branches, 13 manufacturing facilities, and five foundries around the world. Such a workforce allows us to reach customers in 120 countries in a variety of industries. To name a few, these industries include...

Oil, Gas and Chemical / Power Generation / Fire Protection Mining / Municipal and Clean Water / Maritime

On March 29th, NFSA and Common Voices got a head start on the celebration with a visit to Victaulic headquarters that included a side by side burn demonstration that yielded news coverage on We embraced this thought process and with the support of our Board of Directors we embarked on the journey of producing our first commercial that would capture this essence.

What Used to Be focuses on the destruction caused by fire, with the voices of the lives that once lived, loved, and enjoyed the home. We were careful to make sure the point of "from homes to high rise" and the ending tag, "Fire Sprinklers Buy Time. Time Buys Life" were incorporated in the commercial. We are monitoring the impressions and actions that occur because of this campaign. We have targeted areas that are prime for this message, and our hope is to expand this over time with Chapter and IP funding.

If you've not seen the commercial, make sure you visit **www**. **FireSprinklersBuyLife.com**. We've established a standalone website that has everything about this outreach. You can see the commercial and all the supporting resources available to those who view it and then want to include fire sprinklers in their new home, apartment or condo. Promoting the widespread acceptance of the fire sprinkler concept.... yes, we believe this campaign supports our mission very well. Team NFSA continues to push the envelope. We hope you like our latest example of this.

Until next time, stay safe, Victore

4 stations.

NFSA President Shane Ray provided the narration and Sher Grogg shared her personal testimony as a Common Voices advocate. It was a great day that showcased the value of our *"partners in progress."*



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Inspection Testing and Maintenance Automated Technology

by Vince Powers, NFSA's ITM Specialist



It doesn't seem all that long ago that I received a strange stare from an authority having jurisdiction (AHJ) when I pulled a couple hose monsters out of my van for a fire pump test. It took a little persuading, but eventually he allowed me to use them in lieu of playpipes and a handheld pitot. That was over 20 years ago, but it is interesting how far technology in the fire protection industry

has advanced since the 1990's let alone since Leonardo Davinci's sprinkler system creation in the 1500's.

Technology has some effect on every part of our industry. It changes how we communicate with our customers, coworkers and code officials. How many times do we pick up a phone to actually make a phone call these days? The days of going to document rooms for plans and specs are long gone. Now many jurisdictions are moving to on line submittals for permits and approvals.

While the idea of automated testing seems new, it is not. Fire pumps have had an automatic run timer option available for many years. Today, fire pump systems are monitored remotely with software directly from the fire pump controller or in some cases by remotely logging into fire alarm control panels. Devices like the zone check flow switch tester and auto-test waterflow alarm switch have been in development for several years. Both devices have the word automatic either in their data sheet or description, but they both require some manual operation in order to complete the test such as turning a key or operating a solenoid. Both are a great concept which in part is saving water and are definitely technological advancements in the industry.

While there are upfront costs for automated testing, it can help the owner save money in the long run and hopefully will ensure that they will conduct regular inspection testing and maintenance items that are not currently being done. Automated inspection testing and maintenance can allow owners the ability to perform from procedures and tasks remote locations.

Automated inspection testing and maintenance was introduced in the 2017 edition of NFPA 25 and is also in some installation standards such as NFPA 13, 14, and 20. A few rules for automated testing requirements in NFPA 25 2017 are:

- 1. Water must be flowed once every three years.
- 2. Control valves would need to be fully operated.
- 3. A valve status test would still be required, this could require an automatic drain valve as well.
- 4. Failure of any automated device cannot impede operation of the system.
- 5. A supervisory signal must be received at the fire alarm panel in accordance with NFPA 72.
- 6. All components must be capable of manual operation.

While some of these advancements are great ideas and will help save time and money for building owners, not all will want to support some of these new ways of conducting ITM. As an industry we are reluctant to quickly make changes. There will be some questions to answer before we open our arms to automated testing such as licensing requirements. Would someone without proper license be allowed to conduct these services and properly document the inspections? I am sure there will be many more questions to come as we move into this new age of technology. I don't imagine too far into the future that there will be 100% automatic testing of certain sprinkler devices and systems.•

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Home Fire Sprinkler Day Aimed at Sparking Greater Use of Sprinklers

Day can be recognized anytime during the week of May 19th - 25th

HOME FIRE

SPRINKLER DAY

and the Home Fire Sprinkler Coalition

A project of NFPA's Fire Sprinkler Initiative

by Lorraine Carli, NFPA Vice President of Outreach and Advocacy

t the end of February, a home fire in Halifax, Canada took the lives of seven children who lived in what news accounts reported as a relatively new home. This incident tragically refutes the myth we often hear which is that new homes don't burn. The reality is if you have a fire in your home today, you are more likely to die than you were in 1980. This scary fact underscores a key message from sprinkler advocates – today's fires burn hotter and faster creating a very short, sometimes as little as two minutes, time to escape.

Both the facts and solution to the home fire problem are clear. The facts are 80 percent of the fire deaths happen in homes and if

you have a reported fire in your home, the risk of dying decreases by about 80 percent when sprinklers are present. The solution is home fire sprinklers in all new homes.

NESM

These messages will be front and center all across



North America and beyond as state Fire Sprinkler Coalitions join together to raise awareness around the life-saving benefits of sprinklers in the second Home Fire Sprinkler Day (recognized on any days during the week of May 19th - 25th).

Initiated by NFPA's Fire Sprinkler Initiative and the Home Fire Sprinkler Coalition (HFSC) in 2018, Home Fire Sprinkler Day seeks to galvanize safety advocates across the North America and other places to host events promoting home fire sprinklers. A number of other organizations have been involved in the planning. The aim is to have the fire service and other safety advocates host a sprinkler-related event at some point during the week in all 50 states. Many will be doing side-by-side burn demonstrations. Others will be doing social media campaigns and community education events. Communities in Canada are joining the effort as well. There will be a live side-by-side burn demonstration and press event at NFPA headquarters in Massachusetts on May 22. The alarming number of home fire deaths and injuries each year and the escalating rate of cancer amongst firefighters who are subjected to toxic smoke in home fires, should be on the radar of every decision maker, member of the media and the general public. The event seeks to illuminate the fire and firefighter health problem and the answer on a broad scale. Taking action collectively will send a powerful message that fire sprinklers must be embraced.

It seems like this should be simple. However, the path to greater use and acceptance of home fire sprinklers is more challenging than it should be. Special interest has derailed adoption efforts, spread myths and dissuaded homeowners who seek this level of

> fire safety. While education and advocacy efforts have netted results – three states with mandatory requirements, hundreds of local jurisdictions who have passed some sort of regulation for sprinklers, and

FEATURE

more and more consumers aware of the lifesaving benefits of sprinklers, and more and more consumers aware of the lifesaving benefits of sprinklers, and klers, we need to ignite a large-scale movement to make greater progress and bring this effort to more places. In an era when it is hard to garner attention as people are bombarded with messages in so many ways, it takes unique ways to break through the clutter to not just raise awareness but to spur action. It is the intent that events in multiple places in the same timeframe will increase exposure for this critical issue.

Sprinklers can dramatically reduce home fire deaths, injuries and property loss for generations to come and we can better protect our firefighters from the growing threat of job-related cancer.

Join or create an event in your area. All events taking place during the week will be added to a map on the Fire Sprinkler Initiative website. For more information and resources to use during the week visit www.firesprinklerinitiative.org. **PROUD SUPPLIER OF FIRE PROTECTION PRODUCTS & FABRICATION SERVICES**



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NES

Why does NFPA 25 Ignore NFPA 13?

by Bob Upson, E.I., NFSA Manager of Engineering Services

or a relatively small standard, only about 60 pages long, NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, tends to generate a good deal of heated discussion. The scope of the standard is simple. It sets out the minimum standards for inspection, testing, and maintenance (ITM) of the most common water-based fire protection systems; sprinklers, standpipes, private fire mains, fire pumps, water storage tanks, fixed water spray systems, foam-water sprinkler systems, water mist systems, and the common components shared by all eight of them. For the purposes of this discussion, we will focus on the requirements for sprinklers.

1.1 Scope. This document establishes the minimum requirements for the periodic inspection, testing, and maintenance of water-based fire protection systems and the actions to undertake when changes in occupancy, use, process, materials, hazard, or water supply that potentially impact the performance of the water-based system are planned or identified. (NFPA 25)

The loudest criticism commonly heard about NFPA 25 is that it is "too watered down". In all the text devoted to sprinkler system ITM in **Chapter 5**, **NFPA 13** is only mentioned three times and only in passing. At no place in the standard does it instruct the ITM professional to compare the system in question to NFPA 13. The closest it comes is to require that corrective 'component actions' must be checked for conformance with NFPA 13 or the original installation standard. In short, it is not the intent of NFPA 25 based ITM to ensure that a sprinkler system is in compliance with NFPA 13, *Standard for the Installation of Sprinkler Systems*. It is only the intent that it is in compliance with NFPA 25.

"A Reasonable Degree of Protection"

But why does NFPA 25 ignore so many aspects of NFPA 13; obstructions, sprinkler selection, sprinkler spacing, and even whether sprinklers are present in any given compartment? To answer that we have to look at the stated purpose of NFPA 25:

1.2.1 The purpose of this document is to provide requirements that ensure a reasonable degree of protection for life and property from fire through minimum

inspection, testing, and maintenance methods for waterbased fire protection systems. (NFPA 25)

The intent of the standard is to provide a list of *minimum requirements* that will provide for the highest level of assurance that an installed fire protection system will operate as designed with the least amount of recurring ITM cost. It is this premise that ensures that NFPA 25 is referenced and required by not only NFPA model code documents, but by the International Code Council (ICC) as well.

901.6.1 Standards. *Fire protection systems* shall be inspected, tested and maintained in accordance with the referenced standards listed in Table 901.6.1. (IFC)

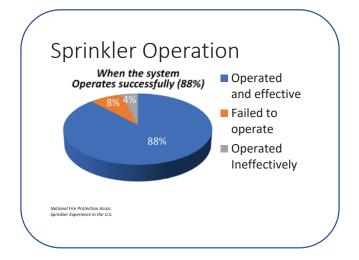
Table 901.6.1
FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS

System	Standard
Water-based fire protection systems	NFPA 25

The minimum requirements in NFPA 25 area based on those ITM issues that have historically resulted in sprinkler systems failures. Over the years it has consistently been found that inappropriate system design is an insignificant contributor to system failures. More importantly, most inspectors are not familiar with all of the requirements of the appropriate installation standards such as NFPA 13. In addition, evaluation of the sprinkler system design would require the engagement of an appropriate design professional which would not be considered cost effective nor practical.

What Causes Sprinkler Systems to Fail?

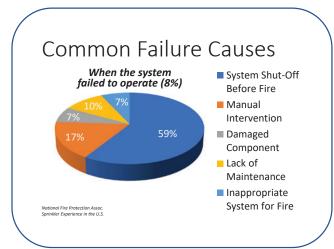
The National Fire Protection Association (NFPA) periodically publishes a document titled, U.S. Experience with Sprinklers, which presents a statistical overview of sprinkler presence and performance in reported fires. The most recent edition, published in 2017, reflects fire data from 2010 through 2014. Granted, the validity of these statistics is sometimes questioned due to ambicontinued on page 32



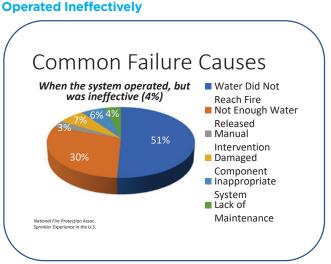
guities in the collection method used to compile it. Nonetheless, it remains one of the best available sources for fire sprinkler data.

One of the most sobering statistics reported is that, in structure fires reported in 2010 – 2014, only 1 in 10 buildings were provided with sprinklers (Ahrens, 2). The good news is that, where sprinklers were present and the fire was considered large enough to operate them, they operated and were successful in 88% of all fires (Ahrens, 5). Of special interest to ITM requirements are the 12% of fires where sprinklers either did not operate at all or operated ineffectively.

Failure to Operate



Time after time, the number one reason sprinklers fail to operate is that they were shut off before the fire ever started. *System Shut-Off Before Fire*' accounts for 59% of the cases where sprinklers failed to operate (Ahrens, 6) or about 7% of sprinkler failures overall. The next largest cause, *Manual Intervention*', is an operational issue concerning cases where well-intentioned firefighting efforts included intentionally preventing sprinklers from operating. Obviously, that particular problem is outside of the scope of ITM. The next two, however, *Damaged Component*' and *Lack of Maintenance*', add up to another 17% that is squarely in the ITM arena. It is only the last and least significant of failure causes that reflects on system design; the realm of NFPA 13.



When sprinklers did operate, they were ineffective only 4% of the time. The largest failure categories are '*Water Did Not Reach Fire*' at 51% followed by '*Not Enough Water Released*' at 30%. Although it could be argued that system design considerations could be reflected in both categories, it is impossible to separate possible design causes from operational causes that may be present in this data. '*Manual Intervention*' at 3% remains an operational concern. The remaining 16% is divided up among the same causes from failure to operate: '*Damaged Component*', '*Inappropriate System*', and '*Lack of Maintenance*'.

Inappropriate System for (Type of) Fire'is a broad category but can reasonably be thought of as indicating a system design that is not appropriate to the actual conditions in the occupancy when the fire occurred. This could indicate an initial design deficiency or a change in occupancy characteristics. The data for these failure cause categories comes from NFIRS which simply lists "wrong type of system" as one coding response for reporting the cause of a system failure (Ahrens 2017, Appendix B). What is important to note is that the 'inappropriate system' category accounts for less than 1% of all sprinkler failures overall.

NFPA 25 versus NFPA 13 in ITM

Buildings are not lost because sprinkler systems are installed improperly nearly as often as they are lost because the systems that are installed are not maintained in working order. This is where there is opportunity to improve the process, but it relies on building owners since they are ultimately responsible for the maintenance of their systems. Some would spend additional money if they were properly educated, others would continue to avoid spending anything at all, and many would negotiate something in between.

The added complexity of determining if an existing system is in conformance with NFPA 13 as part of the ITM process is disproportionate to the cost of providing inspectors with the additional

continued from page 32

training needed to perform a system evaluation or needing to engage an appropriate design professional every time a sprinkler system is inspected in order to verify its adequacy.

1.1.3.1* This standard does not require the inspector to verify the adequacy of the design of the system. (NFPA 25)

Realistically, many ITM inspectors – even those with a background as system installers – will not typically have the expertise to perform a system evaluation in accordance with NFPA 13. Nor will they typically have the needed information about which editions of which codes and standards were in force at the time of construction nor if any alternative arrangements were approved by the AHJ at that time or since.

The design integrity of a system is dependent on the initial approval and acceptance by the AHJ and the ongoing responsibilities of the building owner as defined in **4.1 Responsibility of Property Owner or Designated Representative**. (NFPA 25) It is no accident that a copy of NFPA 25 is required to be provided to the owner as a requirement of NFPA 13 at the time of system acceptance.

Chapter 31 System Inspection, Testing, and Maintenance 31.1* General. A sprinkler system installed in accordance with this standard shall be properly inspected, tested, and maintained by the property owner or their authorized representative in accordance with NFPA 25 to provide at least the same level of performance and protection as designed. (NFPA 13)

Out of Scope Observations and Liability

Ensuring that the building owner is in compliance with all of NFPA 25, NFPA 13, and many other codes and standards is the province of the AHJ and not the NFPA 25 inspector's for good reason. Not

that it is possible to eliminate risk altogether but performing an NFPA 25 inspection and then exceeding the scope of the standard opens the door wide to potential liability. If an inspector notes a condition that does not appear to be in compliance with NFPA 13, there is always the option to raise that concern with the *owner separate from the NFPA 25 inspection report.* Such observations should never be recorded as system deficiencies. It is important that ITM inspection contracts make it clear that the system is not being evaluated for adequacy and that any observations of possible inadequacies do not imply that an evaluation was done.

Summary

NFPA 25 serves a purpose and that purpose is to provide objective requirements for ITM that provide the best assurance of successful system operation in the event of a fire. It is entirely a 'wear and tear' document based on the premise that the system being inspected was properly designed, installed, and accepted. The *only* concern is to ensure that it will operate as intended.

Based on historical records of fires in sprinklered buildings, this approach directly addresses the most common causes of sprinkler failures objectively and provides the most effective balance between cost and benefit for the building owner.

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FEATURE

UL Issues First Certification for Trace Heating Equipment for Use on Fire Sprinkler Branch Lines

by Kerry M. Bell, Corporate Fellow Principal Engineer – Fire Sprinkler and Pump Equipment UL LLC

nderwriters Laboratory has recently published a certification for trace heating equipment for fire sprinkler system use including the installation on sprinkler branch lines. This new certification complements the requirements in the *NFPA 13, Standard for Installation of Sprinkler Systems*¹ and provides an additional option for protecting fire sprinkler piping from freezing in cold environments.

NFPA 13 Requirements

NESA

To prevent damage and facilitate the effective discharge of water from a fire sprinkler system, NFPA 13 generally references the use of a dry pipe system, pre-action system, or a listed antifreeze solution in areas subject to freezing. As an alternative, NFPA 13 also allows for trace heating systems (heat tracing as referenced in NFPA 13) to be used on a wet pipe sprinkler system in certain locations (not including heated valve enclosure rooms) provided the heat tracing system is listed (certified) for this purpose. Furthermore, to address the unique concerns associated with the use of trace heating systems on sprinkler branch lines, NFPA 13 requires that trace heating be specifically certified for this type of installation as well. Several concerns associated with the use of trace heating equipment for the fire sprinkler system application include issues such as following:

Will the trace heating prevent freezing for the range of pipe sizes for which it is intended to be used?

Will the trace heating create excessive temperatures at the heat responsive element of a fire sprinkler?

Are there alarms and/or signals provided for conditions such as low sprinkler system temperature, high sprinkler system temperature, ground faults, and the like?

Do the manufacturer's design and installation instructions include the appropriate information necessary to properly install the trace heating system and not permit an obstruction to the sprinkler beyond that which is permitted in NFPA 13?

The requirements in NFPA 13 highlight the importance of a certification that addresses these important issues in a manner such that the level of safety provided by a sprinkler system is not degraded when heat tracing systems are used.

Product Certification for Fire Sprinkler Applications

Trace heating equipment has been used for decades in a broad range of applications such as building plumbing systems, fuel lines, deicing of roofs and gutters, frost heave protection and similar applications. Organizations involved in product certification, including UL, have been certifying trace heating equipment for many of these end use applications. However, these certifications do not address the unique concerns associated with the use on a sprinkler system intended to provide fire safety. With this in mind, it is important to verify that that the trace heating equipment used on a fire sprinkler system is certified for this specific use. Otherwise, the level of safety provided by the fire sprinkler system may be adversely impacted.

A trace heating system intended for fire sprinkler applications is typically comprised of several elements including the trace heating cable elements and associated controls. The 2005 edition of IEEE Std 515.1, IEEE Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Heat Tracing for Commercial Applications did not include comprehensive requirements relating to the use of trace heating systems in sprinkler systems. UL staff, along with other stakeholders, participated in the development of IEEE Std 515.1-2012, IEEE Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Trace Heating for Commercial Applications² which includes construction, performance and other requirements for trace heating systems for fire sprinkler use as well as other applications. UL's certification of trace heating for fire sprinkler systems includes the application of requirements from the 2012 edition of IEEE 515.1 that are relevant to sprinkler systems along with additional requirements described in UL 515A, Outline of Investigation for Electrical Resistance Trace Heating and Associated Controls for Use In Sprinkler and Standpipe Systems3. Several of the key requirements included in these standards are as follows:

Performance tests using a section of sprinkler branch line piping with a sprinkler installed to evaluate the ability of the trace heating system to prevent (1) the sprinkler system water from freezing at low ambient temperatures and (2) the sprinkler's heat responsive element from reaching excessive temperatures during high ambient temperature conditions.

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Provisions for permanent connection to a power supply.

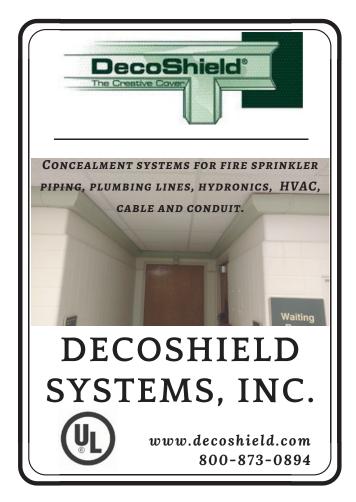
Provisions for connection to a fire alarm system.

Tests to confirm the ability of the trace heating system to provide important alarms and signals, such as low water temperature, high water temperature, failure of the primary controller, ground faults, loss of continuity and loss of incoming supply voltage.

Tests of the trace heating system controls to confirm compliance with relevant requirements of UL 864, Control Units and Accessories for Fire Alarm Systems4.

Confirmation that instructions are available from the manufacturer to properly design and install the trace heating system so that it will provide the necessary freeze protection and not obstruct the water discharge from a sprinkler in an unacceptable manner. The information included in the manufacturer's instructions require the use of a non-combustible insulation and protective cover that will maintain its integrity when exposed to water discharged from a sprinkler system.

The requirements associated with the UL listing of trace heating systems are comprehensive and are intended to address the needs of the fire protection community relative to maintaining effective fire sprinkler protection even in cold environments.



Recent UL Certification of Trace Heating Equipment for Fire Sprinkler Use

Since UL certifies trace heating equipment for several other enduse applications, it is important to understand that the only trace heating systems UL certified for use in fire sprinkler systems are those that are included in the category entitled "Heating-Cable Systems for Use on Fire Protection System Piping" which has the UL product category designation of VGNJ /VGNJ7. The following is the only current UL certification information on the trace heating equipment.

CHROMALOX INC								
	1C)3	Gamr	na Drive, Pittsburgh, PA 15238 US	δA			

Trace Heating Product Identification	Minimum Ambient Temperature for Trace Heating Cable Installation, °F	Model of Controller for Trace Heating Cable	End-use Application
SRF-CR/CT Series	-40	ITC-FS 1, ITC-FS 2	Supply piping and sprinkler branch lines

It is important to understand that trace heating certifications issued by organizations other than UL may have been investigated to the outdated, 2005 edition of IEEE 515.1 that does not include all of the relevant requirements for sprinkler system use.

Summary

When sprinkler systems are installed in locations subject to freezing, NFPA 13 generally references the use of a dry pipe system, pre-action system or a listed antifreeze solution, but this standard also allows for other approaches to be used to prevent the freezing of water in the system. While NFPA 13 does not permit trace heating systems to be used in lieu of heated valve enclosure rooms, these systems provide an option for protecting portions of fire sprinkler piping from freezing in cold environments. As highlighted in NFPA 13, it is important for trace heating equipment to not only be listed (certified), but certified specifically for the fire sprinkler system application including use on sprinkler branch lines, if intended for this type of installation. UL's certification of trace heating equipment for fire sprinkler use includes comprehensive requirements that evaluate the ability of the equipment to maintain the integrity and effectiveness of a fire sprinkler system.•

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"Outline of Investigation for Electrical Resistance Trace Heating and Associated Controls for Use In Sprinkler and Standpipe Systems", UL 515A, Underwriters Laboratories, Inc., Northbrook, IL, May 30, 2014.

"*Control Units and Accessories for Fire Alarm Systems*", UL 864, Underwriters Laboratories, Inc., Northbrook, IL, March 29, 2018.

The Academy of Fire Sprinkler Technology

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Primary Products/Services: Fire Sprinkler Fabrication & Supply

Market Area:

Northeastern US

Hours of Operation: 7:00 a.m. - 5:00 p.m. Mon.-Fri.

Management:

Deardra Murphy, President Vince Murphy Sr., Vice President Vince Murphy Jr., General Manager Dan Boice, Sales Manager Mike Murphy, Regional Sales Manager Travis Granger, Insider Sales Inga Wright, Accounts Payable

Sales Contact:

Michael Murphy, Regional Sales Manager Tel: 215.858.2508

Company Profile:

Since its inception in 1991, Accu-Fire remains a family owned and operated business. We are dedicated in providing superior fabrication and unparalleled service to our customers. Our 90,000 sq. ft. fabrication facility has over ten acres of pipe inventory. In late 2018, we finished an adjacent 45,000 sq. ft. storage facility to house our loose inventory. All products are delivered on our company trucks equipped with either a 65 foot knuckle boom crane or rear mounted fork lift. In addition to fabrication, Accu-Fire is a full-service supplier of fire sprinkler devices. Visit www.Accu-Fire.com for product affiliation. Accu-Fire is an approved Women's Business Enterprise.



Aegis Technologies, Inc.

319 Circle of Progress Dr Pottstown, Pennsylvania 19464-3811 Tel: 610.676.0300 Fax: 610.676.0383 Website: www.aegistechnologiesinc.com Email: ejensen@aegistechnologiesinc.com

Founded: 2007

Primary Products/Services:

Adjustable Drop Nipples, Non-adjustable Drop Nipples, Welding Outlet Fittings

Market Area:

No. America, Europe

Hours of Operation:

8:00 a.m.-4:00 p.m. EST

Management:

Erik T. Jensen - President Theodore R. Jensen -Exec Vice President Terry F. Clark - VP of Sales Michael D. Ketterer - VP of Engineering

Sales Contact:

Terry Clark, V.P. Sales Email: tclark@aegistechnologiesinc.com

Company Profile:

Aegis Technologies, Inc. is a domestic speciality fittings manufacturer that has the know how, experience, and determination to provide your fitters with high quality fittings at a value that will help you continue to realize material and labor savings. The Aegis product offering consist of the Adjuster adjustable sprinkler drop, the Dropster non-adjustable sprinkler drop and Whizweld Branchlet welding outlet. The Adjuster is an inexpensive fitting that saves comeback labor by addressing the installation variances in the horizontal plane which account for the majority of comeback costs. The Dropster eliminates the traditional make-up labor of a reducing coupling and nipple in the field or shop. The Whizweld Branchlet with its compound contour design provides excellent fit for easy one-pass welding. Whizwelds are made for automatic welders.



AGF Manufacturing, Inc. 100 Quaker Lane Malvern, Pennsylvania 19355-2479 Tel: 610 240-4900 FAX: 610 240-4906 Email: jmchugh@testandrain.com Website: www.agfmanufacturing.com

NATIONAL FIRE SPRINKLER ASS

Founded:

1986

Primary Products/Services: Fire Sprinkler System Products and Accessories.

Market Area:

International

Management:

Jim McHugh George McHugh

Sales Contact:

Jim McHugh Email: jmchugh@testandrain.com

Company Profile:

AGF is the designer and manufacturer of the most reliable and versatile line of inspector's test and drain valves, auxiliary drains, corrosion monitors, air venting valves, and accessories for the Fire Sprinkler industry. Over the years, AGF has introduced several unique products that accommodate the varying demands of the fire protection industry, and help manage fire safety systems more efficiently, resulting in more reliable systems that save resources. At AGF, we are continually working in the field to improve existing products and deliver innovative, reliable, and code compatible fire protection products for commercial and residential fire sprinkler systems worldwide. Our product line includes: TESTANDRAIN®, COLLECTANDRAIN®, CORRINSITE[™], PURGENVENT[™], REMOTETEST[®], INSPECTOR'STEST[™], RISERPACK[™], and TES-TANSAVE[™].

American AVK Company

2155 Meridian Boulevard Minden, Nevada 89423 Tel: 775.552.1400 FAX: 775.783.1031 Email: roe.dr@avkus.com Website: www.americanavk.com

Founded:

1985

Primary Products/Services: Valves and Hydrants

Market Area:

North and South America

Hours of Operation: 8:00 a.m.-5:00 p.m.

Management: Al Jurkonis, President

Michael Chambon, Director, Business Development

Sales Contact:

David Roe, Business Unit Mgr, Fire Protection Tel: 775.552.1430 Email: roe.dr@avkus.com

Company Profile:

American AVK is a leading US manufacturer of gate valves, fire hydrants and accessories for the water, wastewater, fire protection and irrigation industries.

AVK was one of the first valve manufacturers in the world to develop and design the Resilient Seated Gate Valve. AVK is at the forefront of technology for products serving the Water Works and Fire Protection Industries. American AVK was incorporated in 1985 to introduce AVK gate valves to North America. AVK is in a state-of-the-art 180,000 sq. ft. manufacturing facility in Minden, Nevada. American AVK is a subsidiary of the AVK Group of Companies, a global manufacturer of valves, hydrants and accessories for the Water Works, Waste Water, Fire Protection and Natural Gas Industries.

American Backflow Products Company

PO Box 37025 Tallahassee, Florida 32315 Tel: 800.575.9618 Website: www.backflowparts.com

Founded:

1976

Hours of Operation: 8:00 a.m.-6:00 p.m. M-F EST

Management: Mark Inman, COO Email: imark@backflowparts.com

Company Profile:

American Backflow Products Company is your complete source for backflow preventer repair parts, accessories and enclosures. Founded in 1976, our company is the nation's leading backflow preventer specialist, trusted by thousands of technicians, plumbing contractors, fire line contractors, irrigation contractors, building managers and city officials across the country. Our dedication to providing the most comprehensive selection of backflow preventer repair parts is second to none and only matched by the knowledge of our highly trained staff. We carry nearly every imaginable part for all the major brands of backflow preventers. Whether you have Ames, ARI, Conbraco Apollo, CLA-VAL, Febco, Flomatic, Hersey, Watts, Wilkins, Viking or Rain Bird equipment, we stock the repair parts you need. Our Assembly Repair Matrix makes it easy to find the correct repair parts, repair procedures or specification sheets for all current backflow prevention assemblies. Select your manufacturer and model and all the information you need to repair the assembly will be displayed. If you are ordering parts online, simply select the order form button, fill it out and email it to us and a member of our staff will contact you within 24 hours to complete your order.

We use fast, reliable and insured shipping couriers to get your backflow parts to you, on time – every time anywhere in the country or around the world. We guarantee same day shipping and our website even provides UPS tracking so you'll know where your order is and when it will arrive.

Amtrol, Inc.

1400 Division Road West Warwick, Rhode Island 02893 Tel: 401.884.6300 Fax: 401.884.5276 Website: www.amtrol.com

Management:

Wolfgang Neumann, Product Manager

Anvil International

2 Holland Way Exeter, NH 03833 Tel: 603.418.2800 Website: www.anvilintl.com

Founded:

1850

Primary Products/Services:

Pipe connections, Grooved couplings and fittings, valves, hangers, strut fittings, seismic bracing, flexible sprinkler connections, engineered hangers, and fabrication machinery.

Market Area:

International

Hours of Operation: 8:00 a.m.-5:00 p.m., Mon.-Fri.

Management: Tom Fish, CEO

Dean Taylor, Vice President Tony Ciccone, CFO

Sales Contact:

Customer Service Email: customerservice@anvilintl.com Tel: 1-800-301-2701 Fax: 708.534.5441

Company Profile:

For more than 165 years, Anvil International

has provided quality products combined with the latest technology, industry expertise, and superior customer service. This is why Anvil is a trusted, go-to source for all fire protection piping systems. The unmatched range of domestic and globally-sourced products for fire protection piping systems offered by Anvil provides versatile and dependable performance for a wide range of applications. Leading innovation with the broadest seismic bracing solutions and flexible sprinkler piping available. Our brands include: Anvil®, FlexHead®, AFCON®, Gruvlok®, Merit®, NAP, and Anvil Engineered Pipe Support (EPS). Products are UL/ULC listed and FM Approved and are available in a full range of styles and functionality, including: Gruvok® Grooved Coulings, Fittings & Flanges, Gruvlok Valves, Gruvlok Roll Groovers, Anvil SPF™ Cast Iron & Ductile Iron Threaded Fittings, Anvil® Cast Iron & Malleable Iron Threaded & Flanged Fittings, Anvil SPF Cast Iron & Ductile Iron Threaded Fittings, Anvil® Steel Pipe Nipples & Steel Pipe Couplings, SPF Steel Pipe Nipples, Merit® Tee-lets, Drop Nipples & Steel Welding Flanges, SPF O-lets, Anvil® Pipe Hangers & Support & All Thread Rod, Anvil-Strut® & Strut Fittings, Afcon® seismic bracing and support solutions, and FlexHead® flexible fire sprinkler connections. Anvil's NAP brand manufactures fabrication equipment to include automatic welders, plasma cut-off and hole cutting equipment, make-on machines and pipe threaders. Anvil combines the latest technology and most current fire protection ratings with the trusted history and manufacturing experience that have made Anvil the go-to source for fire protection and piping products, and that means better performance and better service for you and your business.

APEX Pumping Equipment, Inc.

720 Heartland Drive, Unit P Sugar Grove, Illinois 60554-9864 Toll Free: 866.563.2739 Fax: 630.466.4499 Email: sales@262apex.com Website: www.262apex.com

Founded:

1996

Primary Products/Services:

Fire Pumps Equipment Sales, Service, Annual Testing, Valves, Tanks, Nitrogen Generators, Corrosion Inhibitor, Controllers, Pump House Packages, Backflow Prevention

Market Area:

IL, IN, MN, FL. NE, IA, ND, SD

Hours of Operation:

Monday-Friday. 8:00 a.m.-5:00 p.m & 24 hour

emergency service

Management:

Brad Clemmons, President Vince Rodriquez, Vice President Bruce Jacobson, Sales Manager Sales Contact: Bruce Jacobson Email: bjacobson@262apex.com

Company Profile:

Founded by Brad Clemmons in 1996, APEX has grown & expanded its capabilities, as well as territory for the fire protection community, covering several states in the Midwest and now in Florida! Employing over 20 TEAM members that are selling & servicing nearly everything in the fire pump equipment room! We also supply tanks both above and in-ground, fiberglass, poly and steel. Corrosion issues? No problem. We can provide Nitrogen generation equipment. Need a valve in or out of the pump room? We stock it! No project is too big or too small when it comes to fire pump equipment. From UL listed residential fire pumps to fully enclosed fire pump equipment systems. Need a fire pump controller? Single phase 120 volt up to 4160 volt. Reduced voltage with or without transfer switch. We can walk you through your needs and get you taken care of. If it breaks down, call us. We have 24-hour emergency service! 630.392.

Apollo Flow Control/Conbraco Industries

PO Box 247 Matthews, North Carolina 28106 Tel: 704.841.6000 FAX: 704.841.6021

Primary Products/Services:

Flow Controls-Ball Valves, Backflow Preventers

Market Area:

Worldwide

Hours of Operation:

7:30 a.m.-5:30 p.m. EST, Mon.-Fri. Management: Michael Bedzyk, Sr Director Business Development, Commercial Products Brian Ragone, Senior Vice President, Sales & Marketing John Wells, Director, Sales Administration Hans Ohren, Backflow Product Manager

Sales Contact:

Michael Bedzyk, Sr Director Business Development, Commercial Products Tel: 614.619.4993

Company Profile:

Apollo Valves/Conbraco Industries- Employing 1,200 people to manufacture and market MADE IN AMERICA valve products. Featuring UL/FM Backflow Preventers, UL Ball Valves, UL 300# pressure and relief controls. Introducing the new Stainless Steel 4A / 4An DC, DCDA, RPZ, and RPDA assemblies in 2 ½"-8" sizes, featuring light weight SS, short lay lengths, vertical & horizontal approvals, low flat pressure loss performance with mix/match grooved butterfly, or OS&Y, or Post Indicator shutoffs for ease of installation in any fire protection application, and the new UL/ FM approved carbon and stainless steel Apollo Press for Fire Protection Systems.



ARGCO

3145 Tiger Run Court Suite#105 Carlsbad, CA 92010Tel: 760.727.1644 Toll-Free: 800.854.1015 Fax: 760.727.3270 Website: www.argco.com

Founded:

1981

Primary Products/Services:

Fire Sprinkler Specialties, Fire Equipment, Piping Tools, Thread Sealants, Hangers & Fasteners, Pipe Joining

Market Area:

International

Hours of Operation: 6:00 a.m.-4:00 p.m. PST, Mon.-Fri.

Management:

Frank Bishop, Sales Manager Lawrence Kent, Sales Tom Keigwin, Sales Gustavo Cedillos, Sales

Sales Contact:

Frank Bishop, Sales Manager Tel: 800.854.1015 Fax: 800.924.5922

Company Profile:

With over 35 years in the industry, ARGCO's outside-the-box philosophy sets this company apart from the rest.

Innovative products available nowhere else, great value on every day sprinkler items with equal quality at half the price of big brand names. The product line includes pipe working tools and replacement parts, pipe hangers & fasteners, valves, thread sealants, grooved pipe fittings and a ton of fire sprinkler specialties.

Asurio, Inc.

8181 Arista Place Suite 100 Broomfield, Colorado 80021-7916 Tel: 877.444.1488 Website: www.asurio.com

Founded: 2007

Primary Products/Services:

Data Collection and Inspection Software Market Area:

Global

Hours of Operation: M-F 6 a.m.-6 p.m. MDT

Management:

Top Myers, President Kelly Murphy, Business Development Manager

Sales Contact:

Kelly Murphy, Business Development Manager Email: kmurphy@asurio.com

Company Profile:

BirdDog from USA-based Asurio, Inc. is a cloudbased, mobile inspection & data collection system. One of the most versatile, configurable mobile inspection systems on the market. BirdDog is easily configurable for multiple industries, regions & inspection and data collection needs. The BirdDog Mobile Inspection System automates & streamlines gathering inspection data in the field, and the management, sharing and reporting of inspection data to ensure compliance with regulations, risk management, or asset management. BirdDog operates on the top three standard technology platforms: Apple, Android and Microsoft. The BirdDog Mobile Inspection System results and streamlined, more accurate inspections, improved compliance, minimize risk, savings in time & money, improved productivity and more.

AutoSPRINK (Div. of M.E.P. CAD, Inc.)

181 N Arroyo Grande Blvd Suite 105 Henderson, Nevada 89074 Tel: 877.418.8526 Fax: 702.566.0598 Website: www.autosprink.com

Founded: 1997

Primary Products/Services: 3D Sprinkler Design Software

Market Area: National and International

May/June 2019 | 39

Hours of Operation:

6:30 a.m.-5:00 p.m. PST, Mon.-Fri.

Management:

Kevin Maddux, President Adam Bonaldi, V.P., Business Development

Sales Contact:

Amanda Vinson, Executive Assistant Tel: 877.418.8526 x114 Fax: 702.566.0598 Email: a.vinson@mepcad.com

Company Profile:

AutroSPRINK is the most user-friendly, true 3D and BIM compliant fire sprinkler design program available today. It does not require Revit or AutoCAD training. Its simple windows-based format is so intuitive, new users can design, do hydraulic calculations and stock list a complete project after only one week of training.



Backflow Direct

2484 Mercantile Drive Rancho Cordova, CA 95742 Tel: 916.760.4524 Email: sales@backflowdirect.com Website: www.backflowdirect.com

Founded: 2012

Primary Products/Services: Stainless Steel Backflow Preventers

Market Area: U.S.A.

Hours of Operation: 7:00 a.m.-4:00 p.m. Mon-Fri

Management: Doug Powell, CEO Kent Powell, CFO

Sales Contact: Brad Scott, Dir. of Sales & Mktg Tel: 916.760.4524 Email: brad@backflowdirect.com

Company Profile:

Backflow Direct was established in 2012 to design and manufacture a revolutionary backflow prevention product line it would later call the Deringer. The Deringer product line is now the smallest, lightest, most economical, bestperforming and only all-stainless steel backflow prevention valve...and yes, it is built in the USA. Backflow Direct was founded by the Powell family, previous owners of Ames Company and Hunter Innovations, creators of the Silver Bullet, Colt and Maxim backflow prevention product line. This ownership, for more than 35 years, has been responsible for the introduction of every major design and marketing advancement in the backflow industry. Such advancements include single-body housing, fabricated valve housing, stainless steel construction, large diameter single-access port, differentially loaded check, independent check module, butterfly shut off valve, always resulting in shorter, lighter and better performing products. Backflow Direct is introducing the Deringer line with a radical and game-changing marketing strategy; selling our products directly to contractors, installers and testers...our customers.



BlazeMaster® Fire Protection Systems -Lubrizol

9911 Brecksville Road Cleveland, Ohio 44141 Tel: 855.735.1431 Website: www.BlazeMaster.com

Founded:

1984

Primary Products/Services:

BlazeMaster® Fire Protection Systems

Management:

Mark Knurek, Sales and Market Segment Manager, Americas Connect with us at: www.blazemasterblog.lubrizol.com www.Blazemaster.com

Company Profile:

BlazeMaster[®] Fire Protection Systems are approved for light hazard residential and commercial applications, as defined by NFPA 13, 13R and 13D. BlazeMaster[®] Pipe and Fittings are lightweight making installations easier and faster as pipe can be cut on-site, saving money on labor and material costs. Their resistance to corrosion means less maintenance, better hydraulic performance and a lower lifecycle cost.

Buckeye Fire Equipment

1170 Corporate Dr W Ste 201 Arlington, Texas 76006-6813 Tel: 817.633.3626

BuildingReports

1325 Satellite Blvd. Ste 1607 Suwanee, Georgia 30024 Tel: 770.495.1993<tel:770.495.1993> Fax: 770.495.9331<tel:770.495.9331> Website: www.buildingreports.com

Founded:

1999

Primary Products/Services:

Inspection and compliance reporting software

Market Area: Worldwide

Hours of Operation:

8:00 a.m.-5:00 p.m. ET Mon-Fri.

Management:

Jason Kronz, President & CTO Dwight Wills, V.P., Sales & Marketing

Sales Contact:

Dwight Wills, V.P., Sales & Marketing Tel: 770.495.1993 Fax: 770.495.9331 Email: sales@buildingreports.com

Company Profile:

Building safety compliance is critical to service companies, building owners and fire and safety officials who are charged with safeguarding occupants. BuildingReports' leading mobile and online inspection reporting solutions enable inspectors to quickly gather data on fire and life safety devices to ensure they are working properly and meet code requirements or identify actions needed to meet compliance through easily verifiable inspection reports. With over four million inspection reports to date, more than 10 billion square feet of floor space in over 630,000 buildings, and over 280 million devices represented, BuildingReports has earned its reputation as the most trusted name in compliance reporting.



Bull Moose Tube

1819 Clarkson Road Chesterfield, Missouri 63017 Tel: 636.537.2600 Email: julie.childress@bullmooseindustries.com

Founded:

1962

Primary Products/Services: Sprinkler Pipe

Market Area: North America

Hours of Operation:

8:00 a.m.-5:00 p.m. M-F

Management:

Jim Charmley, CEO Sushmit Patel, CFO Jeff Strobach, VP Sales

Sales Contact:

Dave Weinrich, General Sales Manager Tel: 636.537.2600 Email: dave.weinrich@bullmooseindustries.com

Company Profile:

Bull Moose was founded in 1962, building right from the start on such core values as reliable quality, stable production and exemplary service. The following decades saw Bull Moose Tube grow from a single plant in Missouri to eight production operations from coast to coast. Those far-reaching facilities enable us to be particularly well positioned for responsive service that sets the standard for the industry.

Bull Moose Advantages:

- UL listed (US & Canada) and FM Appro.
- ASTM A135 and A795 Type E. Grade A Certified.
- Complies with NFPA 13, 13R and 14.
- Industry-leading hydraulic characteristics.
- CRR of 1.0 and greater.
- All pipe NDT weld tested
- We have the most stocking locations in the industry, for best delivery and availability.
- Plain end or roll groove.
- EddyGuard II® bacterial resistant internal coating.
- Custom Length Options.
- Hot dipped galvanization
- Reddi-Pipe® red pipe to eliminate field painting.
- Compatible for use in wet, dry, pre-action and deluge sprinkler systems. For more information, go to: www.bullmoosetube.com.

C-Aire Compressors

2620 Fox St Wayzata Minnesota 55391-9339 Tel: 651.462.3440 Website: www.c-aireinc.com



Chicago Backflow, Inc

12607 S. Laramie Avenue Alsip, Illinois 60803 Tel: 708.389.5600 Fax: 708.389.5632 Email: dsmith@backflow.com Website: www.backflow.com

Founded: 1993

Primary Products/Services:

Backflow Prevention Service, Testing, Installation and Inspection

Market Area:

Northern Illinois and Northwest Indiana

Hours of Operation: 8:00 a.m. - 4:30 p.m. Mon.-Fri.

Sales Contact: Barb Jonas, Office Manager Email: contact@backflow.com

Company Profile:

Chicago Backflow, Inc. is the Premier Backflow Testing Company. We have been serving Northern Illinois and Northwest Indiana since 1993. We are dedicated to protecting your drinking water. Offering full-warranty backflow testing & service. Any and all repair parts, labor and return trips are covered. Never worry about costly repairs to your backflow preventer. We carry over \$400,000 in inventory parts and are available 24/7.



CB Marketing, Inc. (A CBI Company)

12559 South Laramie Avenue Alsip, Illinois 60803 Tel: 708.202.0033 Fax: 708.385.5415 Website: www.cbmarketing.com

Primary Products/Services:

Mfg of 13D pumps and Mfg Representatives of specialty products for fire protection

Market Area: Nationally for 13D Pump Systems

NATIONAL FIRE SPRINKLER AS **2019 BUYER'S GUIDE**

Hours of Operation:

8:00 a.m.-4:30 p.m. Mon.-Fri., 24/7 emergency service

Management:

Michael Eisenhauer, President Douglas Eisenhauer, V.P. Megan Demereckis, Product Manager. Nick Smith, Sales Representative

Sales Contact:

Sales/Quote Contact: Megan Demereckis or Nick Smith New Product Opportunities: Donald J. Smith Tel: 708.202.0033 Fax: 708.385.5415

Company Profile:

CBM designs and manufactures Legend 13D pumps and serves as a manufacturers' rep and service organization for Patterson Fire Pumps, Fire Pump Controls (Master and Others), Steel Water Storage Tanks, pressure vessels and polypropylene 13D tanks, The CBM group also handles fire pump control replacements and repairs. CBM specializes in new product launches and market recaptures for the principals we represent.



Clarke Fire Protection Products, Inc.

100 Progress Place Cincinnati. Ohio 45246 Tel: 513.475.FIRE Email: mmathes@clarkefire.com Website: www.clarkefire.com

Founded:

1964

Primary Products/Services: Diesel Engine Fire Pump Drivers Market Area: Global Hours of Operation:

24/7

Management:

Dane Petrie - President and CEO Justin Strousse - Director of Global Sales Ken Wauligman - Engineering Manager Brandon Cushman - Production Manager **Sales Contact:**

Mike Mathes, Marketing Manager Email: mmathes@clarkefire.com

Company Profile:

Clarke Fire Protection Products is a global supplier of UL/FM diesel fire pump drivers, meeting NFPA20 and country-code requirements. Products

Management:

Michael Eisenhauer, President Douglas Eisenhauer, V.P.

include the pressure-limiting driver (PLD) and Tier 3 EPA-certified engines. Manufacturing locations are Cincinnati, Ohio and Coatbridge, Scotland.

Complete Pump Service Co., Inc.

461 South Irmen Drive Addison, Illinois 60101 Tel: 630.628.1600 Fax: 630.628.1709 Website: www.completepump.com

Founded: 1964

Primary Products/Services:

Fire Pump Testing/Service on all Water Application Pumps

Hours of Operation: 7:00 a.m.-4:30 p.m. w/ 24 hr. emergency service

Management: Richard D. Ficarra, Jr., President Laura Ficarra Allen, Treasurer

Sales Contact:

Rich Ficarra, President Tel: 630.628.1600 ext. 107 Fax: 630.628.1709

Company Profile:

Complete Pump Service Company offers a 24hour emergency service and experienced repair of all makes of water application pumps. Complete Pump performs annual fire pump testing. They are authorized representatives for Talco Residential Fire Pumps and also sell fire pump accessories. Complete Pump Service Company's success is based on good, honest service.



FIRE PROTECTION

Core & Main Fire Protection

1830 Craig Park Court St. Louis, Missouri 63146 Tel: 800.492.6909 Website: www.coreandmainfire.com

Primary Products/Services:

Full line Supplier and Fabricator Market Area: National

Hours of Operation: 8:00 a.m.-5:00 p.m., Mon.-Fri.

Management: Brad Cowles, President Hank Evans, Regional Dir. of Ops Derek Allen, West Area Director

Sales Contact:

Hank Evans, Regional Director of Operations Email: hank.evans@coreandmain.com

Company Profile:

Core & Main Fire Protection offers the full array of fire protection products and services. With an ever-growing footprint, our strategically located supply and fabrication facilities maintain vast inventories and enable us to provide superior customer service along with today's technology. Our fabrication facilities are backed by strict quality control procedures and offer custom fabrication to meet the needs of your next project.

> Core & Main Fire Protection Branch locations:

Phoenix, Arizona

1450 E Buckeye Road Phoenix, AZ 85034 Tel: 602.256.0050 Fax: 602.256.7117

Hayward, California

2407 Industrial Parkway West Hayward, California 94545 Tel: 510.441.1650 Fax: 510.441.1620

San Francisco, California

111 Toland St San Francisco, CA 94124 Tel: 415.431.8722 Fax: 415.431.8567

Sacramento, California

1120 Blumenfeld Drive Sacramento, California 95815 Tel: 916.565.0466 Fax: 916.565.1852

Fresno, California

4710 E. Commerce Ave. Fresno, California 93725 Tel: 559.441.7171 Fax: 559.441.7175

La Habra, California

751 E. Lambert Rd. La Habra, California 90631 Tel: 562.690.8800 FAX: 562.690.1419

Lodi, California

1625 S. Stockton St. Lodi, California 95240 Tel: 209.334.9768 Fax: 209.334.9773

Fontana, California

15535 Arrow Route Fontana, California 92335 Tel: 909.320.5306 Fax: 909.356.8599

Denver, Colorado

4735 Leyden St. Denver, CO 80216 Tel: 303.305.4507 Fax: 720.941.4347

Tampa, Florida

1430 Massaro Blvd. Tampa, Florida 3361 Tel: 813.620.9058 Fax: 813.626.6912

Orlando, Florida

3655 Old Winter Garden Rd. Orlando, Florida 32805 Tel: 407.299.2275 Fax: 407.298.5038

Palm Beach, Florida

1751 Avenue L Riviera Beach, Florida 33404 Tel: 561.863.5600 Fax: 561.845.6120

Miami, Florida

10810 NW 92nd Terrace Ste. 108 Medley, FL 33178 Tel: 305.477.2383 Fax: 305.805.4923

Jacksonville, Florida

11310 Distribution Ave. West Jacksonville, Florida 32256 Tel: 904.260.4705 Fax: 904.260.4644

Atlanta, Georgia

2157 Tucker Industrial Road Tucker, Georgia 30084 Tel: 770.414.1212 Fax: 770.414.1883

Chicago, Illinois

5144 West 73rd St. Bedford Park, Illinois 60638 Tel: 708.728.9793 FAX: 708.728.9826

Indianapolis, Indiana

8615 East 33rd St. Indianapolis, Indiana 46226 Tel: 317.898.4879 Fax: 317.898.4868

Columbia, Maryland

9325 Snowden River Pkwy #C Columbia, Maryland 21046 Tel: 410.290.8020 FAX: 410.290.8019

Charlotte, North Carolina

75 Odell School Rd. S Concord, North Carolina 28027 Tel: 704.784.4700 Fax: 704.789.9288

Las Vegas, Nevada

4035 W. Oquendo Rd. Las Vegas, Nevada 89118 Tel: 702.382.0331 Fax: 702.382.0671

Brockton, Massachusetts

1123 Pearl St. Brockton, MA 02301 Tel: 508.894.0130 Fax: 508.894.0139

Cincinnati, Ohio

4325 Mulhauser Rd., Ste. 6 Fairfield, OH 45014 Tel: 513.642.7005 Fax: 513.860.1245

Portland, Oregon

12670 SW Leveton Dr. Tualatin, OR 97062 Tel: 503.404.2650 Fax: 503.691.6001

Memphis, Tennessee

3634 Cherry Rd. Memphis, TN 38118 Tel: 901.745.3106 Fax: 901.370.6920

Dallas, Texas

9010 Sterling St Irving, TX 75063 Tel: 972.830.9370 Fax: 972.871.1365

Houston, Texas

5823 Thomas Rd. Houston, TX 77041 Tel: 713.937.4568 Fax: 713.937.0493

Nashville, TN

413 Woodycrest Ave Nashville, TN Tel: 615.932.5656 Fax: 615.736.2760

Oklahoma City, OK

8401 SW 15th Ave OKC, OK 73128 Tel: 405.506.6206 Fax: 405.495.2016

San Antonio, Texas

6215 Krempen Avenue San Antonio, TX 78233 Tel: 210.247-4940 Fax: 210.637.6682

Salt Lake City, Utah

275 West 2855 South Salt Lake City, UT 84115 Tel: 385.419.3950 Fax: 801.467.4099

Seattle, Washington

10013 MLK Jr. Way So. Seattle, WA 98178 Tel: 206.722.9475 Fax: 206.722.9477

Kent, Washington 18802 72nd Ave S Kent, WA 98732 Tel: 253.518.2560 Fax: 425.241.0362

Springfield, VA

8080 Alban Rd, Unit D Springfield, VA 22150 Tel: 703.270.4595 Fax: 703.440.5042

St. Louis, MO

4607 McRee Avenue Saint Louis, MO 63110 Tel: 314.236.9286

New Britain, CT

1 Hartford Square New Britain, CT 06052 Tel: 860.259.9460 Fax: 860.826.0772

Craftmark Pipe Markers

3212 S. Cravens Road Fort Worth, Texas 76119 Tel: 817.457.8753 Website: www.craftmarkid.com



Croker Division

Fire-End and Croker Corporation 7 Westchester Plaza Elmsford, New York 10523 Tel: 914.592.3640 Toll Free: 800.729.3473 Fax: 914.592.3892 Email: info@croker.com Website: www.croker.com

Founded:

1911

Primary Products/Services: Fire Protection Equipment

Market Area: Domestic/International

Hours of Operation: M–F 8:30 a.m.-4:30 p.m.

Management:

Paul Sposato, President Douglas Loew, VP Export Sales Peter Levine. VP Marketing

Sales Contact: Peter E. Levine

Company Profile:

For over a century, Croker has manufactured and supplied the highest quality Fire Hose Standpipe Equipment available in the industry. Croker continues to be an industry leader in quality products as well as dependable service. Our Croker catalog provides building owners, architects, engineers, distributors and contractors with a clear comprehensive specification and purchasing reference guide second to none. Our main warehouse is in Elmsford, New York. We maintain inventory in Dallas, Texas; Detroit, Michigan; Miami, Florida; Atlanta, Georgia; Cleveland and Cincinnati, Ohio; and Wilmington, Delaware.

The Croker product line includes Hose Valves, Pressure Regulating Valves (Pilot, Field Adjustable and Factory Set), Fire Department Connections (Flush, Exposed, Freestanding and Storz), Fire Pump Test Connections, Roof Manifolds, Rack & Reel Assemblies, Cabinets, Extinguishers, Nozzles, Adapters, Inspection & Testing Equipment and much more. New Products include a complete Grooved Coupling Line, High Pressure FDCs & UL Listed Storz Connections. Because our equipment is critical for the protection of lives and property, we are continually striving to maintain and improve

product quality year after year. This has been our mission since 1911. Choose Croker for the finest quality products, competitive pricing and exceptional service.

Regional Warehouses:

Croker Texas

1110 South Airport Circle-Suite 110 Euless, Texas 76040 Tel: 817.354.9900 Toll Free: 877.354.9905 Fax: 817.545.0055 Max Lombard, Regional Sales Manager Jake Lombard, Warehouse Manager

Croker Ohio

4690P Interstate Drive Cincinnati, Ohio 45246 Tel: 513.870.0517 Fax: 513.870.0363 Bob Orth, Regional Sales Manager Matt Riesenbeck, Warehouse Manager

Croker Florida

4038 NE 5th Terrace Unit C Oakland Park, Florida 33334 Tel: 954.314-8973 Fax: 954.314.8974 Leon Benlolo, Regional Sales Manager Joseph Benlolo, Regional Sales Manager





CST Industries, Inc

903 E 104th Street Suite 900 Kansas City, Missouri 64131 Tel: 844-44-TANKS Fax: 913.621.2145 Website: www.cstindustries.com

Founded: 1893

Primary Products/Services:

Fire Protection Storage Tanks Market Area:

Global

Hours of Operation: 8:00 a.m.-5:00 p.m. Mon.-Fri.

Management:

Management: Mike Polsin, Director of Sales, Water/ Wastewater

Sales Contact:

Weston Opat, Central Regional Sales Manager Tel: 913.535.4168 Email: wopat@cstindustries.com

Company Profile:

CST Industries, Inc. (formerly Columbian TecTank[®] /Columbian Steel Tank Company[®]) offers Fire Water Tanks for Commercial, Municipal, and Industrial Applications. With over 350,000 tanks in 125 countries, no other company can match CST's liquid storage tank design, manufacturing, and construction expertise. CST's factory-applied proprietary coating technologies are the best in the business and have been field proven for more than 50 years.

CST leading brands, TecTank[™], Columbian TecTank[®], & Aquastore[®], meet or exceed NFPA 22, FM, LPS, AWWA, USACOE & other industry standards & are manufactured in ISO 9001:2015 certified facilities. Tanks are available for construction by customer, dealer or CST with or without accessories.

Decoshield Systems, Inc.

1500 NW 3rd Street, Suite 105 Deerfield Beach, FL 33442 Tel: 800.873.0894 Fax: 800.585.3894 Email: info@decoshield.com Website: www.decoshield.com

Primary Products/Services:

Decorative cover for fire sprinkler systems

Management:

Linda Camm, President Sales Contact: Linda Camm, President Email: linda@decoshield.com

Del Prado Fire and Water Solutions

4000 Hollywood Blvd. , Suite 555-S Hollywood, Florida 33021-6853 Tel: 845.803.5191 Email: raybar@delpradofw.com Website: www.delpradofireandwater.com

Founded: 2007

Primary Products/Services:

Distributor of Fire Pumps, Fire Sprinklers Systems, Fire Alarm and Detection Systems local and export

Market Areas:

South Florida, NYC, Dominican Republic, Panama, Colombia, and the Caribbean

Hours of Operation:

8:30 a.m.-5:00 p.m., Mon-Fri.

Management:

Robledo E. Aybar, Founder, CEO Jose Antonio Fernandez Elmudesi, COO Sales Contact: Miguel Cuello, Chief Estimator Email: info@delpradofw.com

Company Profile:

At Del Prado Fire & Water Solutions, our goal is to provide our clients integral solutions in Fire Protections Systems & Water Flow. Our represented brands are part of a portfolio of the top rated in each of their respective markets. We have developed an expertise in these products and have an intertwined relationship with our manufacturers, facilitating the know-how and technical knowledge necessary to advise and recommend solutions to our clients. This platform allows us to serve our clients not only from a sale perspective, but also to provide value- added solutions to their needs.

W.S. Darley & Company

325 Spring Lake Drive Itasca, Illinois 60143 Tel: 630.735.3538 Website: www.darley.com

Founded:

1908

Primary Products/Services: Fire and Emergency Services

Market Area: International

Hours of Operation: 8:00 a.m.-4:30 p.m.

Management:

Paul Darley, CEO Jeremy Taylor, Chief Engineer Kevin Sofen, Business Development Sales Contact: Kevin Sofen Email: kevinsofen@darley.com

Company Profile:

The Darley StarterPaq[™] provides a one stop solution for your NFPA 13D fire sprinkler pump needs. The StarterPaq[™] makes your life easier by coming fully assembled, meets all your demands and delivers within 24 hours. Darley is a family owned company involved with the fire industry since 1908. We understand the fire industry and strive to provide the highest level of customer satisfaction. We are dedicated to excellence and offer a diverse line of quality products and services through progressive design, manufacturing and distribution. Darley can design a custom NFPA 13D or 13R around your needs. Darley also specializes in the Hydrant Booster, a decentralized pump station for rural fire departments.

DEWALT

2 Powers Lane Brewster, New York 10509 Tel: 845.230.7581 Website: www.powers.com

Primary Products/Services:

Anchors and Fasteners/Power Tools

Market Area: Global

Hours of Operation: 8:00 a.m.-5:00 p.m. EST, Mon.-Fri.

Management: DEWALT Industrial Tool Co.

Sales Contact:

Kirk Reimer, V.P. Sales & Marketing A&F Email: kirk.reimer@sbdinc.com

Company Profile:

DEWALT is a leading manufacturer of industrial corded and cordless power tools, power tool accessories, and hand tools in categories that include Woodworking, Drilling & Fastening, Concrete & Metal Power Tools, as well as Cutting, Abrasive, and IMPACT READY® Impact Driver Power Tool Accessories. Hand Tool categories include Measuring & Layout, Knives & Blades, Mechanics Tools, and Storage Solutions. With seven manufacturing locations in the USA, DEWALT remains committed to domestic manufacturing and produced over 90 million individual units of Power Tools, Hand Tools, and Accessories in the United States with global materials in 2016 alone. Visit the website to learn more about DEWALT products Made in the USA with global materials.

DEWALT tools can be found nationally and internationally, wherever tools are sold. With more than 1,000 factory-owned and authorized locations, DEWALT has one of the most extensive service and repair networks in North America. For more information, visit www.dewalt.com or follow DEWALT on Facebook, Twitter, and Instagram.

DXP Enterprises

1838 Elm Hill Pike Ste 125 Nashville, Tennesee 37210 Tel: 615.259.9090 Website: **www.dxpe.com**

Eaton's B-Line Business

509 W. Monroe St. Highland, Illinois 62249 Tel: 800.851.7415

EDCOS, Inc.

330 Industrial Park Mercedes, Texas 78570-4300 Tel: 956.565.5660 Fax: 214.975.1158 Email: pedro.valdez@edcos.com Website: www.edcos.com

Founded:

2004

Primary Products/Services: Grooved Fittings, Pipe Valves, Fittings, Hangers, Foam, Bladder Tanks, other. Market Area: New Mexico, Texas, Louisiana, Mexico, Central and South America, Caribbean

Hours of Operation:

8 a.m.-6 p.m. M-F

Management:

Pedro Valdez Elvia Valdez Raul Briones Yvonne Gomes

Sales Contact:

Ania Garcia, International/Domestic Sales Email: sales@edcos.com

Company Profile:

We distribute and supply UL & FM, CE. VdA, other, listed approved fire protection equipment; Pipe, Valves, fittings, Grooved, Welded, Flanged, Mechanical Joint Fittings, Hangers, Butterfly Valves, Wafer Valves, Fire Hydrants, Post Indicators, Nozzles, Fire Hose, Angle Valves. From underground materials to all above ground. We also provide foam concentrate, bladder tanks, ILBP foam pump skids, grooving tools. FM200,C02,Novec1230. We also cover mechanical contractors.

Give us an opportunity. Se Habla Español.

Engineered Corrosion Solutions

11336 Lackland Road St. Louis, Missouri 63146 Tel: 314.432.1377 email: sales@ecscorrosion.com Website: http://ecscorrosion.com

Founded:

2003

Primary Products/Services:

Corrosion management, nitrogen generators, air vents, corrosion monitoring

Market Area: Worldwide

Management:

Jeff Kochelek, CEO Sales Contact: Lucas Kirn, V.P.Sales Email: Ikirn@ecscorrosion.com

Company Profile:

The de facto standard in fire sprinkler corrosion control. Engineered Corrosion Solutions (ECS) is a corrosion engineering firm specializing in helping clients manage risk associated with leaking fire sprinkler systems. We provide scientifically proven nitrogen inerting technology to stop corrosion and extend the useful life of wet, dry, and preaction fire sprinkler systems. Our solutions prevent leaks before they occur.

ECS sells direct to fire sprinkler contractors and offers a suite of corrosion management products for water-based fire sprinkler systems that include:

- ECS Protector Nitrogen Generation System

- ECS In-line Corrosion Detector
- ECS Protector Nitrogen Inerting Vent
- ECS Ejector Automatic Air Vent



Ferguson Fire & Fabrication

Corporate Headquarters 800 South 4th Avenue Mansfield, Texas 76063 Tel: 817.276.7060 Fax: 817.473.3059 Website: www.fergusonfire.com

Founded:

1989

Primary Products/Services:

Fire Sprinkler Material, Special Hazards, Engineered Products and Fabrication.

Market Area:

Continental United States plus Alaska

Hours of Operation: 7:00 a.m. - 4:30 p.m. Mon.-Fri.

Management:

George DiMatteo V.P. - Fire Protection

Company Profile

Ferguson Fire & Fabrication supplies the highest quality fire protection equipment to our customers nationwide. With more than 73 locations and

over 900 associates, we have the reach to supply the most demanding fire protection jobs in the country. Over 32 of our locations have fabrication capabilities and eight of those locations are ISO 9001:2015 Certified, making us the largest ISO Certified fabricator in the country. We offer our customers world-class customer service and unmatched industry expertise. Our associates enthusiastically use their experience to make sure each warehouse location operates in the best interest of the customer and the needs of that local market. From core fire protection products and fabrication to engineered fire protection products, we offer customer access to one of the most comprehensive inventories in the industry. Ferguson Fire & Fabrication is a complete source for all fire protection needs.

FPPI by Smith Cooper

2867 Vail Ave Commerce, CA 90040 Toll-Free: 800.766.0076 Fax: 323.890.4456 Website: www.smithcooper.com www.fppi.com

Founded:

1989

Primary Products/Services: Fire Sprinkler Products

Market Area:

Worldwide

Hours of Operation: 6:00am – 4:00pm PST; Monday - Friday

Management:

Jason Hild, CEO

Sales Contact:

Bill Vollmar, National Sales Manager Fire Protection Tel: 800.766.0076

Company Profile:

Fire Protection Products Inc. (FPPI®) is part of the Smith-Cooper International family of brands. As a single source for fire sprinkler products with a diverse product range, FPPI covers four primary product categories: Accessories, Brass Trim, Standpipe Equipment, and Sealants & Lubricants. FPPI prides itself on its focus on customer service and delivering the highest quality products with operational excellence. Our products are manufactured from best in class materials, and are engineered to be durable, reliable, and easy to install.

Fire Tech Productions, Inc.

7986 B Clyo Road Centerville, Ohio 45459 Tel: 937.434.3473 Website: www.firetech.com

Contact:

Donna Pierron

Providing Training to the Fire Protection Industry since 1987!

Fire Tech Productions specializes in Fire Alarm, Fire Sprinkler and Special Hazards training. From NICET exam prep to hands-on workshops, you will gain insight and understanding of the NFPA codes and how those requirements are put into practice in the field. Pass your exam and become a better technician! Workshops are led by experienced industry professionals.

FormLink Systems

14547 Brookfield Drive Fishers, Indiana 46040-9401 Tel: 317.735.3345 Fax: 317.735.3342 Email: sales@ formlinksystems.com Website: www.formlinksystems.com

Company Profile:

FormLink's easy to use inspection software saves you time and money. With form packages for NFPA-25, NFPA-72, fire extinguishers, and more, you can deliver professional reports in minutes, directly to your customers. Our NFPA and NFSA form licensing means you can continue to use the forms you know and trust. We also have the ability to create custom forms to satisfy any specific requirements outside of the standard forms. Get great software and exceptional customer service, all with less hassle. Make the choice that will change how you do business by partnering with FormLink Systems!

Fox Sprinkler Supply Corporation

951 Estes Court Schaumburg, Illinois 60193 Tel: 847.524.8250 Fax: 847.524.8262 Website: www.foxsprinkler.com

Founded: 2000

Primary Products/Services: Distribution/Fabrication

Market Area:

Illinois, Indiana, Iowa, Wisconsin, Minnesota, North & South Dakota

Hours of Operation:

Mon 5:30 a.m.-5:00 p.m. Tue-Wed 4:30 a.m.-5:00 p.m. Th-Fri 5:30 a.m.-5:00 p.m. Sat 8:00 a.m.-12:00 p.m.

Management:

Scott Sandfox, President Daniel Sandfox, Secretary of Corporation Dan Rossol, Operations Mgr. Sales Contact: Danielle Sandfox, Sales Mgr.

Company Profile:

Fox Sprinkler Supply Corp. is a fire sprinkler supply company with people dedicated to bringing the utmost in service to our customers. Employees with exceptional knowledge and over 20 years in experience in the fire sprinkler industry.

Fuel Technologies International

PO Box 6863 Santa Maria, California 93456 Tel: 805.462.8849 Website: www.fueltechnologiesinternational.com

GECCO, Inc.

23 Baker Drive Factoryville, Pennsylvania 18419 Tel: 570.945.3568 Fax: 570.945.9542 Email: geccoinc@epix.net Website: www.dropmaster.com

Founded:

2002

Primary Products/Services: Dropmaster DM12 and the GDM-300 Power Drive Cart

Market Area: Worldwide

Hours of Operation:

7:00 a.m. - 3:30 p.m. EST

Management:

Orna Clum, Owner Gerald Clum, President

Sales Contact:

David Brown, Director of Sales and Marketing Email: dave@dropmaster.com

General Air Products, Inc.

118 Summit Drive Exton, Pennsylvania 19341 Tel: 610.524.8950 Toll Free: 800.345.8207 Fax: 610.524.8965 Website: www.generalairproducts.com

Founded:

1936

Primary Products/Services:

Air compressors / Nitrogen generators / 13D Pump and Tank Systems / Air Maintenance Devices

Market Area:

Worldwide

Hours of Operation: 8:00 a.m. - 5:00 p.m. EST Mon.-Fri.

Management:

Raymond M. Fremont, President Dave English, Sales Director Raymond M. Fremont Jr., Marketing Director

Sales Contact: David Fremont

Company Profile:

General Air Products, Inc has been a leader in the fire protection industry for over 50 years. Manufacturing a complete line of dry pipe system filling equipment—including air compressors, nitrogen generators, and dry air generators—has uniquely positioned us as the go-to for complete dry sprinkler system filling solutions. We also offer a line of single family 13D pump and tank systems. Our quality products come guaranteed with unparalleled customer service both before and after the sale. Visit us at www.generalairproducts.com or give us a call at 800-345-8207 for details, drawings, and more!

Gesco NV

6442 Arville Street Las Vegas, Nevada 89119 Tel: 702.357.6494 Website: www.gesconv.com

Globe Fire Sprinkler Corporation

4077 Air Park Drive Standish, Michigan 48658 Tel: 989.846.4583 Fax: 989.846.9231 Website: www.globesprinkler.com

Founded: 1914

Primary Products/Services:

Manufacturer of fire protection valves, sprinklers, and system accessories

Market Area:

Worldwide

Hours of Operation:

8:00 a.m.-5:00 p.m. (Eastern), Mon.-Fri.

Management:

Steven R. Worthington, President/CEO Buck Buchanan, Executive Vice President Lori Appold, C.P.A., Chief Financial Officer Stephen Meyer, Vice President Kevin Maughan, Vice President of New Technology Ralph Watson, National Sales Manager Clifton Hartford, Director of Business Development David Worthington, Director of IT Infrastructure

Sales Contact:

David Heron, Director of Customer Relations and Marketing Tel: 989.846.4583 Fax: 989.846.9231

Company Profile:

Globe Fire Sprinkler Corporation is a family owned ISO-9001 certified manufacturer of fire protection valves, sprinklers, and accessories. Globe offers a complete range of USA-produced products for use in residential, commercial, storage, and special hazards applications.

Globe has rapidly developed game-changing new products as the world market demands, including the Universal Manifold/Universal Manifold Check (UM/UMC), the RCW Dry/ Deluge/Preaction Valve, and a revolutionary attic protection scheme that reduces hydraulic demand by up to 70%.

Our 100% USA factory-tested products meet the stringent guidelines of various approval authorities, such as Underwriters Laboratories (UL), Factory Mutual (FM), Conformité Européene (CE), and the Loss Prevention Certification Board (LPCB

Guardian Fire Equipment

3430 NW 38th Street Miami, Florida 33142 Toll-Free: 800.327.6584 Fax: 800.827.3869

Primary Products/Services:

Fire Standpipe Equipment

Market Area: Worldwide

Management: Richard H. Childress, President Lisa C. Peterson, Vice President

Gulf Coast Tank & Construction Company

11173 Highway 36 Wallis, Texas 77485 Tel: 713.637.8778 Website: www.gctanks.com

Harrington, Inc.

2630 West 21st Street Erie, Pennsylvania 16506 Tel: 814.838.3957 Fax: 814.838.7339 Email: paulc@harrinc.com Website: www.hydrantstorz.com/

Founded: 1988

Primary Products/Services:

Hydrant Storz adapter assemblies, Water supply connections, gate valves, Storz, threaded, and flange adapters, gated wyes

Market Area:

Worldwide

Hours of Operation: 8:00 a.m.-5:00 p.m. M-F

Management:

Dave Harrington, President

Sales Contact: Dave Harrington, President Email: daveh@harrinc.com

Company Profile:

Harrington, Inc. is a manufacturer of Hydrant Storz assemblies, intake valves, gate valves, adaptersthreaded, adapters-Storz, and adapters-flange, suction hose, wyes, Siamese, Storz couplings and adapters. Send inquiries to: info@harrinc.com

Hilti, Inc.

7250 Dallas Parkway Ste 1000 Plano, Texas 75024 Tel: 800.879.8000 Website: www.hilti.com

The Hose Monster Company

1330 Ensell Rd Lake Zurich, II 60047 Tel: 847.434.0101 Toll Free: 888.202.9987 Fax: 847.434.0073 Website: www.hosemonster.com

Founded: 1996

Primary Products/Services: Fire pump and flow test equipment

Market Area: Global

Hours of Operation:

Mon.-Thurs. 8:00 a.m.-5:00 p.m. CST, Fri. 8:00 a.m.-4:00 p.m.

Sales Contact:

Michael Anderson, Sales Manager

Company Profile:

The Hose Monster Company is dedicated to providing equipment, software and procedural solutions that make the jobs of maintaining water distribution systems and fire pump testing safe, accurate and simple. All of our products are designed to give accurate information about the water supply that is available to fight a fire at any given moment.

HRS Systems, Inc.

208 Southside Square Petersburg, Tennessee 37144 Tel: 931.659.9760 Fax: 931.659.9763 Website: www.hrssystems.com

Primary Products/Services:

Fire Protection Engineering Software Management:

Hal R. Sanders, P.E., President H. Asa Tuten, Jr., General Manager Marketing Area: Worldwide

Company Profile:

HRS Systems, Inc. is a dynamic fire protection engineering software development and marketing entity. Our goal is to provide fire protection engineering software – second to none – worldwide. Accuracy of calculations and results are paramount, with ease of data entry and attention to user comments and suggestions ranking a close second. Annual updates, at no extra charge, often introduce new features; the JOB COST ESTIMATOR is now included in both HASS® and COOSA® (below) as utilities. HRS Systems, Inc. presents:

- -HASS® for hydraulic analysis of sprinkler systems
- -JOB COST ESTIMATOR for cost estimating
- -HASS HOUSE® for residential sprinkler analysis
- -COOSA® for CO2 system analysis.

All of them are Windows-Based (32 & 64 bit) and available in both English and metric Units plus metric units/Spanish text.

For further information, please e-mail hass@ hrssystems.com.

Huguenot Laboratories, Inc

101 Riverdale Road Port Jervis, New York 12771 Toll Free: 800.228.3793 Fax: 845.858.8821

Founded: 1998

Primary Products/Services: Fire Protection Corrosion Solutions

Market Area:

North America, South America, New Zealand, Australia

Hours of Operation: 7:00 a.m. - 5:00 p.m. Mon.-Fri.

Management:

Tim O'Leary, President Sales Contact: Tim O'Leary, President

Company Profile:

Huquenot Laboratories, Inc. is the leader in providing Microbiological Influenced Corrosion analysis testing to identify and provide mitigation options to address corrosion problems in wet and dry fire sprinkler systems. Huguenot Laboratories has a full suite of portable and permanent Chemical Injection Systems, Wet System Air Release Systems, Corrosion Monitoring Stations, test kits and nitrogen generation equipment to address all of your fire sprinkler corrosion management requirements. Huguenot Laboratories patent pending dry gas inhibitor technology is the industry's first new technology for dry and pre-action systems that allows for a complete corrosion management solution for the treatment of the air source. This new technology out-performs nitrogen and is a fraction of the cost of nitrogen equipment. Please call us at 800.228.3793.



Hydratec, Inc.

64 Haverhill Road Windham, New Hampshire 03087 Tel: 603.434.0502 Fax: 603.434.1348 Email: al@hydracad.com Website: www.hydratecinc.com

Founded: 1972

Primary Products/Services:

Fire Protection Design Software and Service using Revit or AutoCAD

Market Area: Worldwide

Hours of Operation:

9:00 a.m. - 5:00 p.m. Mon.-Fri.

Management:

Alan Johnston, President Paul McKenna, Customer Support Manager Bill McKenna, Design Manager

Sales Contact:

Art Dove, CAD Development Manager Email: sales@hydracad.com

Company Profile:

Hydratec has been providing quality software and design services for over 45 years. Our complete line of software products, along with accessible and knowledgeable customer service, gives the Hydratec customer of any size or experience level an edge in design efficiency. Our software packages include HydraCAD for system design, HydraLIST for fabrication reports, HydraCALC for pipe sizing, HydraCALC-Sizer for pipe size estimating, HydraBID for price estimating, and HydraCAD-R for NFPA 13-D Systems and Hydratec for Revit for direct design, listing and calculations completely within a Revit model. These packages can be used separately, or as an integrated set to provide the best possible AutoCAD or Revit-based solution for 2D or 3D design, BIM, coordination and true Revit content integration.

Hydrogen Innovations

2040 Cortland Avenue San Marino, California 91108 Tel: 626.441.4464 Fax: 562.266.1303 Contact: Robert Sanchez

Inspect Point

24 4th Street Troy, New York 12180 Tel: 888-287-1471 Email: sales@inspectpoint.com www.inspectpoint.com

ITW Commercial Construction/ Buildex – SAMMY

700 High Grove Blvd. Glendale Heights, Illinois 60139 Tel: 630.694.4675 Website: www.itwbuildex.com

Founded: 1967

Primary Products/Services: Pipe Hangers

Market Area:

National

Hours of Operation: 8:00 a.m. – 5:00 p.m. Mon.-Fri.

Management:

J. Schneider, Nat'l Mktg Mgr. Ben Nolen, Product Mktg Mgr. Sales Contact: Bryant Hope, Nat'l Sales Mgr.

Company Profile:

ITW Commercial Construction is a division of Illinois Tool Works, has been a leading manufacturer of fastener systems for the construction industry. Our mission is to provide value-added, innovative product solutions to help contractors and architects build high quality buildings. SAMMYS® suspended anchoring systems have been providing vertical and horizontal overhead structural attachment solutions for decades. They are manufactured to meet the design challenges of modern structures and are aesthetically compatible with green design principles seeking to provide borrowed lighting and space framing benefits. All Sammys are made here in the USA, using the Teks® and Tapcon® technology preferred by US contractors for years. Sammys are best known in the fire sprinkler industry, but are adaptable for use in plumbing, electrical and HVAC applications.

JG Innovations, Inc.

P.O. Box 8128 Janesville, Wisconsin 53547-8128 Tel: 608.314.8710 Fax: 608.314.8712 Email: jack@jgius.com Website: www.jgius.com

Founded: 2009

Primary Products/Services:

Soffi-Steel® System JGI Interlock™ Concealment Systems ALumA-Fit™ Concealment System

Market Area:

Nationwide Hours of Operation:

8:00 a.m.-5:00 p.m. M-F

Sales Contact:

Allen Stowers, President Tel: 608.314.8710 Email: sales@jgius.com

Company Profile:

JG Innovations, Inc. offers the Soffi-Steel® and

Interlock[™] concealment systems for the purpose of concealing Fire Sprinkler Systems, Piping, Plumbing, HVAC, ductwork and cable. The Soffi-Steel[®] and Interlock[™] Concealment Systems are made in the USA, produced from A60/G90 galvannealed steel and carry industry approvals and certifications in the US and Canada. While our custom fabricated enclosure systems are unsurpassed in retrofit applications, the flexible design makes it equally impressive for new construction projects. Utilize the Soffi-Steel® and Interlock[™] Concealment Systems for applications in: -Universities -Psychiatric Facilities -High Rise Apartments - Residential Properties -College Dormitories -- Nursing Homes -- Jails and Prisons -- Commercial Buildings

Johnson Controls, Fire Suppression

1400 Pennbrook Pkwy Lansdale, Pennsylvania 19446 Phone: 215.362.0700 Toll Free: 800.558.5236 Fax: 800.877.1295 Website: www.Tyco-fire.com www.Tyco-fire.com www.SprinkCAD.com, www.SprinkCAD.com, www.Ansul.com, www.Pyrochem.com, www.Grinnell.com, www.OnlineTechXchange.com

Founded:

1850

Primary Products/Services:

Water & chemical based fire suppression product, fire grooved piping products, sprinkler system design software, training services.

Market Area:

Global

Hours of Operation: 8:00 a.m.-6:30 p.m. EST, M-F

Management: Rekha Agrawal, G.M.,

Sales Contact:

Michael Mottice, Director of Sales, Americas Tel: 800.558.5236 Fax: 800.877.1295

Company Profile:

Johnson Controls fire suppression solutions deliver an unmatched range of suppression systems, extinguishing agents, fire sprinklers and valves, design software, piping products, fittings, and fire-fighting equipment. We leverage our global scale and deep expertise to drive innovation, advance safety and solve the unique challenges of customers around the world. Our arsenal of brands includes some of the most trusted names in the industry, such as TYCO, RAPID RESPONSE, GRINNELL, SPRINKCAD, ANSUL, and CHEMGUARD.

KENNEDY VALVE/Division of McWane, Inc.

1021 E. Water Street PO Box 931 Elmira, NY 14902 Tel: 607.734.2211 Fax: 607.734.3288 Website: www.kennedyvalve.com

Founded:

1877

Primary Products/Services:

Fire protection valves and accessories since 1877. UL-FM supervised BFV; UL-FM OSY gate valves grooved end, grooved x flanged, flanged and HDPE; UL-FM grooved end check valves and indicator posts..

Management:

John Chalk, Customer Service Manager Contact: www.kennedyvalve.com

Key2Act

1970 S. Calhoun Road New Berlin, Wisconsin 53151 Tel: 262.821.4100 Website: www.key2act.com

Knox Company

1601 W Deer Valley Rd Phoenix, Arizona 85027-2112 Tel: 623. 687.2300 Fax: 623.687.2283 Website http://knoxbox.com Contact: Cynthia Jones

Long Island Pipe Supply, Inc.

586 Commercial Ave. Garden City, New York 11530 Tel: 516.222.8008 Fax: 516.222.9234 Website: www.lipipe.com

Management:

Robert Moss, Owner

Company Profile:

Since 1975 Long Island Pipe Supply, Inc., owner Robert Moss has been driven to be the premier

supplier of fire sprinkler pipes, valves, fittings, devices and accessories. Growth did not come easy.

"Building a fabrication and supply business takes years," Moss explains. "You develop accounts and prove yourself by providing top products and the highest level of service."

Long Island Pipe Supply carries the largest selection of nationally known brands at the most competitive prices. Our friendly, dedicated, knowledgeable staff provides outstanding service to every customer. They have the knowledge and ability to schedule a job, so your order is received on time.

Fast, reliable delivery.

An exclusive distributor of many product lines, we ship domestically and worldwide from our thirteen strategic locations. We stock every item needed to complete any fire sprinkler system job world-wide.

Master Control Systems, Inc.

910 North Shore Drive Lake Bluff, Illinois 60044 Tel: 847.295.1010 Fax: 847.295.0704 Email: sales@mastercontrols.com Website: www.mastercontrols.com

Founded:

1965

Primary Products/Services: Fire Pump Controllers

Management:

William Stelter, President Lisa Villa, Sales Support Brian Urbanik, Technical Support

Company Profile:

Master Control Systems, Inc. manufactures the world's first UL/FM Variable Speed Electric Fire Pump Controller. In addition, we manufacture all types of NFPA 20, UL/FM approved, fire pump controllers. We offer electric controllers from 5-400 hp at 200-600 vac. We also offer diesel fire pump controllers and accessory items. Five year warranties are standard on EC-series controllers or DEC-series diesel controllers.



The Metraflex Company 2323 West Hubbard Street Chicago, Illinois 60612-1403 Tel: 312.738.3800 Email: zekeb@metraflex.com Website: www.metrafire.com

Founded:

1958

Primary Products/Services: Seismic Expansion Joints and Hangers for Fire Sprinkler Systems

Market Area:

International

Hours of Operation: 8:30 a.m. - 5:00 p.m. CST Mon.-Fri.

Sales Contact: Jeremy Wright, Product Manager

Company Profile:

Metraflex is the leader in seismic expansion joints for fire sprinkler systems. Metraflex manufactures both seismic expansion joints and seismic breakaway hangers. Seismic expansion joints come in UL listed and FM approved versions, and movements from ±4 inches to ±24 inches. Seismic expansion joints are available in groove ends, weld ends and thread ends. Pipe sizes range from 1/2-inch up to 12-inches, depending on end fitting.



Newburgh Windustrial

65 Jeanne Drive Newburgh, New York 12550 Tel: 845.566.5300 Fax: 845.566.5340 Website: www.newburghwindustrial.com

Management:

Dean Lucas, President James Lucas, Vice President

Senior Account Representative: David J. Vandeyar Cell: 914.646.3283

Company Profile:

As part of a national wholesale distribution organization, known as WinSupply Inc., Newburgh Windustrial specializes in wholesale distribution of pipes, valves, and fittings for the fire sprinkler industry. From its 60,000 sq. ft. facility in the mid-Hudson Valley, Newburgh Windustrial provides fire sprinkler contractors throughout the northeast with customized fabrication of fire sprinkler systems. With a sharp focus on personalized service, Newburgh Windustrial has the expertise to be knowledgeable about the products they sell as well as the technical requirements of their customers.

The Noble Company

7300 Enterprise Drive Spring Lake, Michigan 49456 Tel: 800.878.5788 Fax: 231.799.8850 Website: www.noblecompany.com

Founded:

1946

Hours of Operation: 8 a.m.-5 p.m. EST M-F

Management:

George Rudolph, National Sales Mgr.– Engineered Fluids Dave Wormmeester, Vice President– Sales & Marketing

Sales Contact:

George Rudolph Tel: 800.878.5788 Fax: 231.799.8850 Email: sales@noblecompany.com

Company Profile:

Founded in 1946, Noble Company manufactures premium-quality, innovative products for the Tile, Plumbing, Heating and Cooling, and Fire Sprinkler industries. Noble Company's Engineered Fluids Division manufactures freeze protection fluids for various applications such as Hydronic under-floor-heating, Solar Heating Systems, Geothermal Systems, and Fire Sprinkler Systems. Noble Company is an American-based company, manufacturing products in Michigan and Louisiana. Our products are designed and manufactured to exceed applicable industry standards and are engineered for reliability.

nVent CADDY

2372 Paradise Ridge Drive Round Rock, Texas 78665 Tel: 609.504.3301 Website: www.erico.com/caddy.asp

PAC Pump & Systems, Inc.

106 Hobart St. Hackensack, New Jersey 07601 Tel: 201.621.0500 Fax: 201.621.0506 Website: www.pacpump.com

Founded: 2003

Primary Products/Services:

Fire pumps and controllers-sales and service.

Market Area:

New Jersey

Hours of Operation: 7:00 a.m. - 6:00 p.m. Mon.-Fri.

Management:

William Casey, President Craig Pastore, Sales & Service Cate Griffing, Inside Sales Sales Contact: William Casey

Company Profile:

PAC Pump & Systems, Inc. is a distribution and service company whose dedicated team of engineers, sales personnel, customer service representatives, project managers, machinist, mechanics and administrative personnel offers years of experience in supplying rotating equipment and services. We ensure our staff is prepared to meet the requirements of each and every customer by investing in education, training and state-of-the-art technology. Our customers benefit from our unparalleled problem- solving strategies that have developed through our many years of experience.



Pace Supply Corp

6000 State Farm Dr Santa Rosa, California 94928 Tel: 877.934.3473 Email: twiitala@pacesupply.com Website: http://www.pacesupply.com/divisions/fireprotection/

Founded: 1994

Primary Products/Services:

Plumbing, Fire Protection & Fabrication, Pump & Water Well, Water Treatment, Wastewater, Waterworks, Residential and Commercial Hydronics, and Water Heater

Market Areas: Northern California & Hawaii

Hours of Operation: M-F 6:30 a.m.-5:00 p.m.

Management: Fire Protection Manager: Tim Wiitala

Sales Contact:

Fire Sales Email: firesales@pacesupply.com

Company Profile:

PACE is a locally & employee-owned wholesale supply company serving California and Hawaii with 20 wholesaler locations. PACE provides supplies to contractors and retailers. Our employee owners are proudly setting the PACE for supply and service!

Paragon Industries

3378 W. Highway 117 Sapulpa, Oklahoma 74006 Tel: 918.291.4459 Website: www.paragonindinc.com

Perimeter Solutions

1520 Brookfield Avenue Green Bay, Wisconsin 54313 Tel: 920.593.9445 Website: www.perimeter-solutions.com

Permabond Engineering Adhesives

223 Churchill Ave. Somerset, New Jersey 08873 Tel: 800.714.0170 Fax: 732.868.0267 Email: info.americas@permabond.com Website: www.permabond.com

Founded:

1978

Primary Products/Services:

Adhesives, Sealants Market Area:

Worldwide Hours of Operation:

M-F 8:00 a.m.-5:30 p.m. EST

Company Profile:

Permabond, a leading manufacturer of engineering adhesives, supplies high-quality industrial adhesives to customers in virtually every industry worldwide, including products specifically designed for the Fire Protection Industry. Permabond Pipe Sealants use anaerobic technology to prevent leaks in sprinkler systems. Used in fabrication and installation, Permabond Pipe Sealants replace pipe dope and sealing tapes with a complete and reliable seal. Cure is initiated by the presence of metal and the absence of air. Permabond's sales and technical experts are ready to assist you with all of your bonding and sealing needs.

PHD Manufacturing, Inc.

44018 Columbiana-Waterford Rd. Columbiana, Ohio 44408 Tel: 330.482.9256 Toll-Free: 800.321.2736 Fax: 330.482.2763 Website: www.phd-mfg.com

Founded:

1972

Primary Products/Services:

PHD's products include: pipe hangers, bean clamps, roller supports, clamps, brackets, threaded accessories, nuts, bolts, fittings, braces, as well as strut product that include channel, clamps, nuts, inserts fittings, braces, brackets, bases and more. PHD also carries Fire Protection and Seismic products featuring CPVC straps and sway brace fittings.

Market Area:

U.S.,

Hours of Operation:

8:00 a.m.-5:00 p.m., Mon.-Fri.

Management:

Joe Corvino, President Jonathon Corvino, Vice President of Sales 330.921.9362 Rick Persing, Nat'I Sales Manager, Sprinkler Division Gene Hancock, National Sales Manager, Electrical Division

Sales Contact:

Rick Persing, Nat'l Sales Manager, Sprinkler Division Tel & Fax: 574.536.3857

Company Profile:

PHD Manufacturing, Inc. is a leading domestic manufacturer in the commercial and industrial plumbing, mechanical, electrical and fire protection industries since 1972.

Known for its service, PHD takes pride in providing quality products, problem solving solutions and on-time deliveries. With one of the largest inventories in the industry, the company's 23+ stocking warehouses make PHD products accessible throughout the United States and worldwide.

To find solutions to fit your need. Call 1-800-321-2736 or send an e-mail to customerservice@ phd-mfg.com today!

Pipe Fabricators

8580 Valley Forge Lane N Maple Grove, Minnesota 55369 Tel: 763.488.8100 Toll-Free: 866.747.7473 Fax: 763.488.8140 Website: www.pipefabricatorsps.com

Founded:

1984

Primary Products/Services: Sprinkler supplier with fabrication

Market Area: Minnesota, North Dakota, South Dakota, Nebraska, Illinois, Wisconsin, Iowa

Hours of Operation: 6:00 am – 5:00 pm Mon-Fri

Sales Contact:

Mark Augustson, General Manager Tel: 763.488.8100 Fax: 763.488.8140

Company Profile:

Pipe Fabricators is a supplier of fire protection products and fabrication. Since its establishment, Pipe Fabricators has evolved from a fabricator to a sprinkler supplier with fabrication. Our company has emerged over the years and will continue to grow as we enter new markets and expand our product line.

Plumbers Supply Company

1000 E. Main St. Louisville, Kentucky 40206 Tel: 502.540.0223 Toll-Free: 800.626.5133 Fax: 502.540.0330 Website: www.plumbers-supply-co.com

Founded:

1921

Primary Products/Service:

Plumbing, Hydronics, HVAC, Fire Protection Market Area:

Kentucky, Tennessee, Indiana, Western West Virginia

Hours of Operation: Mon.-Fri. 7:00 a.m.-5:00 p.m.

Management:

Brian Roberts, Outside Sales for Indianapolis area, Fire Protection Sales Manager, All locations Tel: 317.783.2981 Cell: 317.557.1559 Email: Brian.Roberts@plumbers-supply-co.com

INSIDE SALES: INDIANAPOLIS, INDIANA

Inside Sales Manager: Jason Davis Tel: 317.472.8921 Cell: 317.450.6764 Email: Jason.Davis@plumbers-supply-co.com Dale Sigler Tel:317.472.8903 Email: Dale.Sigler@plumbers-supply-co.com

INSIDE SALES: LOUISVILLE, KENTUCKY

Inside Sales Manager: Mike Newton Tel: 502.540.0332 Cell: 502.817.2079

Email: Mike.Newton@plumbers-supply-co.com Sam Alvey Tel: 502.540.0223 Cell: 502.550.2053 Email: Sam.Alvey@plumbers-supply-co.com Beau Jones Tel:502.540.0332 Email: Beau.Jones@plumbers-supply-co.com

INSIDE SALES: LEXINGTON, KENTUCKY

Ronnie Wilson Tel: 859.255.0700 Cell: 859.621.5278 Email:Ron.Wilson@plumbers-supply-co.com

INSIDE SALES: EVANSVILLE, INDIANA

Brent Mabrey Tel: 812.425.3115 Cell: 812.305.3203 Email: Brent.Mabrey@plumbers-supply-co.com

FIRE PROTECTION OUTSIDE SALES, KY, TN, So. IN, WV

John Jutz Tel: 502.540.0272 Cell: 502.376.0639 Email: John.Jutz@plumber-supply-co.com

Company Profile:

Started in 1921 as Plumbing and Mill Supply house. Plumbers Supply has opened branches and mini-branches in over ten locations in our area. Plumbers Supply has been a fire protection supply house of steel pipe and fittings since its inception, but has had a dedicated fire sprinkler sales division since late 1980's.

Polymer Molding, Inc.

1655 West 20th Street Erie, Pennsylvania 16502 Toll-Free: 800.344.7584 Fax: 814.455.0289 Website: www.polymermolding.com

Founded: 1978

Primary Products/Services: Product Protection

Market Area: Worldwide

Hours of Operation: 8:00 a.m. - 5:00 p.m. Mon.-Fri. Management: Chris Vinson, Vice President, Sales



Potter Electric Signal Company

5757 Phantom Drive St. Louis, Missouri 63042 Toll-Free: 314.595.6900 Fax: 314.595.6999 Email: orders@pottersignal.com Website: www.pottersignal.com

Founded:

1898

Primary Products/Services:

Flow, Pressure, Tamper Switches, Corrosion Mitigation

Market Area: Worldwide

Hours of Operation: 8:00 a.m. - 5:00 p.m. CST Mon.-Fri.

Sales Contact:

Tim Freiner, Vice President – North American Sales Email: sales@pottersignal.com

Company Profile:

Established in 1898, Potter Electric Signal Company produces a wide array of products including fire sprinkler monitoring systems, nitrogen generators, corrosion monitoring/ testing, electronic fire systems, vault and safe security systems and boiler/chiller and industrial control products. At Potter, not only do we supply our customers with products that provide real world solutions for their unique needs, we strive to provide them unequaled service and technical support. Every employee at Potter is committed to provide the very best product and service available for the protection of life and property. Potter is THE Symbol of Protection.

Potter Roemer

17451 Hurley Street Industry, California 91744 Toll-Free: 800.366.3473 Fax: 714.545.3552 Website: www.potterroemer.com

Founded:

1937

Primary Products/Services:

Fire Extinguishers, Hoses, Valve Cabinets Market Area: U.S.A.

Management:

George Brown, Vice President Sales

Company Profile:

Potter Roemer has been the leading supplier of interior hose and standpipe equipment to the fire protection industry. From four regional shipping facilities, PotterRoemer has the largest uncommitted inventory in stock and available for your project.

Quick Response Fire Supply, LLC

1015 E. State Street Athens, Ohio 45701 Tel: 703.975.8183 Website: www.qrfs.com

Quimby Equipment Company, Inc.

159 Express Street Plainview, NY 11803 Tel: 516.349.5959 Website: www.quimbyinc.com Email: info@quimbyinc.com

Primary Products/Services:

Pump Sales Management: Greg Ross, Sales Representative



Reliable Automatic Sprinkler Co., Inc. 103 Fairview Park Drive Elmsford, New York 10523 Toll-Free: 800.431.1588 Fax: 800.848.6051 Email: info@reliablesprinkler.com Website: www.reliablesprinkler.com

Founded:

1920

Primary Products/Services:

Sprinklers, Valves, Special Hazards/Systems, System Components, and Fabrication

Market Area:

Worldwide

Management:

Kevin T. Fee - President John McNamara – V.P., Corporate Sales Kevin T. Fee, Jr. V.P., Sales - Americas Adam Robotham – V.P., International Sales and Operations Rex Schwendiman – V.P., System Components Steve Wolin – V.P., Compliance/Product Technology F.J. Fee IV — V.P. Marketing and Business Development

Company Profile:

For almost 100 years, Reliable Automatic Sprinkler Co., Inc. has been one of the world's largest manufacturers of automatic fire sprinklers, fire protection valves, and accessory products, and an international distributor of sprinkler system components. Reliable provides innovative, quality fire protection solutions for commercial, industrial, and residential properties while maintaining the highest level of customer service.

CORPORATE OFFICE:

103 Fairview Park Drive Elmsford, NY 10523 Tel.: 800.431.1588 Website: www.reliablesprinkler.com

CORPORATE MANUFACTURING FACILITY:

1470 Smith Grove Road Liberty, SC 29657 Tel: 864.843.1700

DOMESTIC DISTRIBUTION:

LOS ANGELES, CA (BREA, CA) 800.352.4365 phone 848-6055 fax

SAN FRANCISCO, CA (SAN LEANDRO, CA) 800.352-4365 phone 800.848.6055 fax

> DENVER, CO 877.440.2598 877.205.7230 fax

ORLANDO, FL (LONGWOOD, FL) 800.801.3097 phone 800.862.0934 fax MIAMI, FL (MIRAMAR, FL) 954.437.2520 phone 954.437.2289 fax

ATLANTA, GA (NORCROSS, GA) 800.652.1819 phone 800.848.6052 fax

CHICAGO, IL (HANOVER PARK, IL) 800.228.6274 phone 800.848.6053 fax

BOSTON, MA (WALPOLE, MA) 800.431.1588 phone 800.848.6051 fax

MINNEAPOLIS, MN (ROSEVILLE, MN) 877.827.2816 phone 877.827.3043 fax

NEW YORK, NY (ELMSFORD, NY) 800.431.1588 phone 800.848.6051 fax

> COLUMBUS, OH 800.228.6274 phone 800.848.6053 fax

DALLAS, TX 800.442.6742 phone 800.848.6054 fax

HOUSTON, TX 866.978.9965 phone 866.978.9979 fax

WASHINGTON, DC (LORTON, VA) 877.883.8831 phone 877.851.1553 fax

> SEATTLE, WA (KENT, WA) 877.327.2563 phone 877.327.2574 fax

WORLDWIDE DISTRIBUTION:

AUSTRALIA (ADELAIDE) +61 8 8162 9555 phone +61 8 8162 9359 fax

CANADA, EASTERN (ONTARIO) 800.790.6443 phone 800.790.6486 fax

CANADA, WESTERN (BRITISH COLUMBIA) 604.542.1864 phone 604.542.1894 fax

> CHINA (SHANGHAI) +86 21 5403 7021 phone +86 21 5403 7022 fax

GERMANY (HAMBURG) +49 40 5589 81871 phone +49 40 5589 81873 fax

MEXICO AND LATIN AMERICA 800.442.6742 phone 800.848.6054 fax

> SINGAPORE +65 6635 8100 phone +65 6734 3176 fax

UNITED ARAB EMIRATES (DUBAI) +971 4 880 8830 phone

UNITED KINGDOM (LONDON) +44 13 4231 6800 phone +44 13 4231 4679 fax

FABRICATION FACILITIES:

DENVER, CO 877.440.2598 phone 877.205.7230 fax

PORTLAND, OR phone 877.523.3178 fax 877.418.2498

GRAND PRAIRIE, TX phone 888.787.4015 fax 972.352.6402

Response Fire Supply

2040 Yale Street Ste D Santa Ana, California 92704-3923 Tel: 714.754.7100 Website: www.responsefiresupply.com

RJB Wholesale, Inc.

12418 NE 124th Street Kirkland, Washington 98034 Tel: 206.707.3385

SBS Tanks USA, Inc.

1925 Longmire Road Building 6 Conroe, Texas 77308 Tel: 832.702.7430 Website: www.sbstanksusa.com



Solberg/Perimeter Solutions

1520 Brookfield Ave Green Bay, Wisconsin 54313-8808 Tel: 920.593.9445 Website: www.solbergfoam.com

Email:

david.pelton@perimeter-solutions.com

Founded: 1971

Primary Products/Services: Foam Concentrates and Foam Systems Hardware

Market Area: Global

Hours of Operation: M-F 7:30 a.m. - 4:30 p.m. CST

Management:

Bill Smith, Sr. Director, Global Sales bill.smith@ solbergfoam.com Tel: +1 713 623 2352

Mitch Hubert, Sr. Director, Global Product Development mitch.hubert@solbergfoam.com Tel: +1 920 593 9454

Craig McDonnell, Class B Foam Business Development Manager craig.mcdonnell@ perimeter-solutions.com Tel: +1 920 461 8790

Dave Pelton Sr., Director, Marketing david. pelton@perimeter-solutions.com Tel: +1 920 593 9447

Todd Wayshville, Western Region Sales Manager todd.wayshville@solbergfoam.com Tel: +1 619 206 5487

Jim Scott, Midwest Region Sales Manager jim. scott@solbergfoam.com Tel: +1 219 575 9665

Jim Schwander, Eastern Region Sales Manager jim.schwander@solbergfoam.com Tel: +1 610 306 5371

Joe Pada, Technical Services Engineer joe. pada@solbergfoam.com Tel: +1 920 593 9446

Sales Contact:

Todd Wayshville, Sales Manager Email: todd.wayshville@solbergfoam.com

Company Profile:

A Division of Perimeter Solutions LP, SOLBERG has the expertise, capabilities and resources to serve the fire protection and firefighting industry. The company is a global resource for firefighting foam concentrates and foam systems hardware. Solberg offers a line of environmentally sustainable fluorosurfactant and fluoropolymer-free foam concentrate products, an innovation in Class B firefighting foam, and traditional Class B, C6 based PFOS-free, AFFF and AR-AFFF foam concentrates including a Class A foam. SOLBERG Foam Systems Hardware is engineered by a team with over 225 years of combined in-the-field fire protection experience for high-hazard, high-risk environments. At Solberg, we continually pioneer firefighting foam technologies to meet the latest demands in the Aerospace, Aviation, Chemical, Defense, Energy, Fire Service, Marine, Mining, Oil & Gas, Petrochemical, Pharmaceutical, Pipeline. Solvents & Coatings and Utilities industries.

South-Tek Systems

2940 Orville Wright Way Wilmington, North Carolina 28405 Tel: 910.332.4173

Spears Manufacturing Company

15853 Olden Street Sylmar, California 91392 Tel: 818.364.1611 Website: www.spearsmfg.com

SPP Pumps

2905 Pacific Dr. Norcross, Georgia 30071 Tel: 770.409.3280 Fax: 770.409.3290 Email: sales@spppumps.com

Founded:

1875 Primary Products/Services: fire pumps and fire pump systems

Market Area:

Global

Hours of Operation: 8:00 a.m.-5:00 p.m. M-F EST

Management:

John Kahren, President Jimmy Hunt, Director of Sales, Fire Division Veronica Bryant, Marketing Services

Sales Contact:

Jimmy Hunt Tel: 770.409.3280 ext. 2204 email: james_hunt@spppumps.com

Company Profile:

SPP Pumps has been working with consultants, contractors, installers and end-users for more than a century to achieve the most cost effective fire system pumping solutions. Since SPP Fire was formed in 1875, it has built a reputation for quality and value that has made it unquestionably the leading supplier of Approved Fire Protection Pumping Packages throughout the world. SPP Pumps has six facilities worldwide that offer the same attention to quality and value that has made SPP Pumps a market leader for over 100 years.



Starfire Inc.

9825 South 54th Street Franklin, Wisconsin 53132-8668 Tel: 414.483.5959 Fax: 414.483.1566 Website: www.starfireusa.com Email: info@starfireusa.com

Founded:

1987

Primary Products/Services:

Fire Sprinkler Material and Fire Pumps Market Area:

Midwest & Southwestern U.S./International

Hours of Operation: 8:00 a.m.-5:00 p.m. CST, Mon.-Fri.

Management: Darrel R. Malek, Chairman

Scott Mathwig, President

Sales Contact: Gil Brzezinski, Vice President Tel: 414.483.5959 FAX: 414.483.1566 Email: info@starfireusa.com

Company Profile:

Starfire, Inc. is an independent fire protection supplier with an extensive product line and a knowledgeable service team. We stock fire sprinklers, control valves, fittings of all types, monitoring devices, bladder expansion and surge suppression tanks and system accessories. We also sell and service fire pumps, controllers and water storage tanks. In addition, Starfire Systems and Starfire Extinguisher offer special hazard fire protection solutions including design, supply and installation. Please see our website for additional information and we encourage you to contact either our Wisconsin or California location with any questions.

CALIFORNIA BRANCH:

Starfire, Inc. 1391 N Kraemer Blvd Anaheim, California 92806-1403 Tel: 714.632.8713 Fax: 714.632.1014 Contact: Dan Coll

Superior Tank Company, Inc.

9500 Lucas Ranch Road Rancho Cucamonga, California 91730 Tel: 909.912.0580 Website: www.superiortank.com



advanced ideas. advanced solutions

System Sensor

3825 Ohio Avenue St. Charles, IL 60174 Tel: 630.377.6580 Toll-Free: 800.736.7672 Fax: 630.377.6495 Website: www.systemsensor.com

Founded:

1984

Primary Products/Services:

Fire Sprinkler System Monitoring Products, Fire Detection and A/V Notification Devices

Market Area:

Worldwide

Hours of Operation:

7:30 a.m. - 5:00 p.m. CST Mon.-Fri.

Management:

- Dino Koutrouki, President, Honeywell Fire, Globally
- Dave Pakech, VP of Fire Sales
- Dave Pakech, VP of Fire Sales
 Chuck Kitts, Director of Fire Sprinkler Sales
- Samir Jain, Director of Marketing
- Dennis Sekermestrovich, Western Regional
- Dennis Sekermestrovich, vvestern Regional Manager
- Mark Schneider, Eastern Regional Manager
- Sales Contact: Chuck Kitts, Director of Fire Sprinkler Sales

Company Profile:

System Sensor is a global manufacturer of sprinkler monitoring products, including water flow detectors, supervisory switches, pressure switches, deluge releasing panel, alarm bells and explosion-proof products. With sales, service and manufacturing facilities extending throughout the Americas, Europe and Asia, System Sensor promises to continue developing advanced ideas that deliver advanced solutions. Our high production standards and constant communication with our customers gives you a quality product with the information and support you need to install and maintain our products. Because we place a premium on research and development, System Sensor sprinkler monitoring products are quick and easy to install and maintain.



Talco Industries

6040 NE 117th Ave. Portland, Oregon 97220-1012 Tel: 503.668.1231 Fax: 503.688.1234 Website: www.talcofire.com Email: ks@talcofire.com

Founded: 1981

Primary Products/Services:

Residential and commercial packaged fire pump systems

Market Area: U.S. & Canada

Hours of Operations: M-F 8:00 a.m.-5:00 p.m. PST

Sales Contact:

Kim Strobeck, Sales Manager Email: ks@talcofire.com

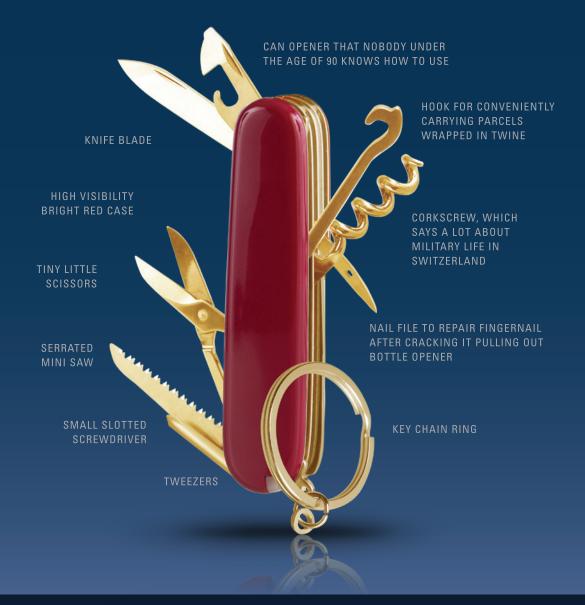
Company Profile:

Talco Fire Systems has been building premium quality fire pump systems for over 30 years. Specializing in both residential and commercial packaged fire pump systems, we design & custom build packaged units to fit any application. Our packaged systems will save you time, money, and headaches. We pull it all together, you drop it in place. Whether you need a residential fire pump and tank for your home or a 5000 GPM diesel driven fire system for a multi-warehouse complex - Talco has you covered.

Tank Connection

3609 North 16th Street Parsons, Kansas 67357 Tel: 620.423.3010 Fax: 620.423.3999 Website: www.tankconncetion.com

INSPIRATION



Complete floor control assembly or shotgun riser – right out of the box

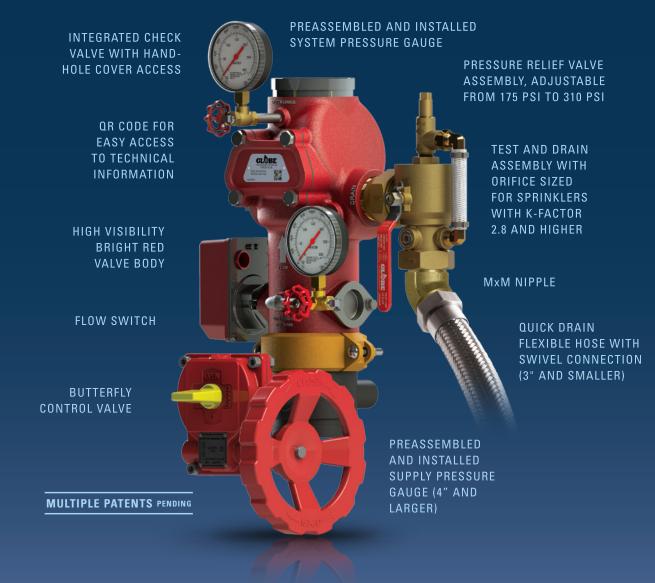
GLOBE UMC UNIVERSAL MANIFOLD CHECK

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Technical Support +1 989-414-2600 techservice@alobesprinkler.com Customer Service +1 989-846-4583 domesticsales@globesprinkler.com

INNOVATION



We took our inspiration for the Globe UMC Universal Manifold Check assembly from the best example of everything you need in one convenient package. We've integrated all the necessary components of a shotgun riser or floor control assembly into a single component, ready to install, right out of the box. Connect two grooved couplings and the Quick Drain flexible hose and you're done – saving you time at every step of the design, fabrication, purchasing and installation process. Available in 1 1/4" through 8" sizes and in right- and left-hand configurations. To increase your efficiency, visit **GlobeSprinkler.com/UMC**.

Learn more at **GlobeSprinkler.com/UMC**



Founded: 2003

Primary Products/Services: Bolted RTP (Rolled, Tapered Panel) tanks,

Aluminum Domes

Market Area:

Worldwide

Management: Kenton Jarman VP Marketing

Sales Contact:

Jeremy Burke, Liquid Market Manager Email: sales@tankconnection.com

Company Profile:

Tank Connection designs, manufactures and installs the top rated bolted tank design available for fire protection applications worldwide. Designed to meet Factory Mutual and NFPA 22 requirements, the Tank Connection performance package remains unmatched in the industry.

Tank Connection's proprietary LIQ Fusion 8000 FBETM coating system and application technology outperforms all other coatings in water storage applications, and is offered exclusively by Tank Connection. Tank Connection facilities are ISO 9001 Certified QMS. Tank Connection field construction processes are superior in guality and field safety..

Contact Tank Connection today and allow us to exceed your expectations.

Telgian

10230 S. 50th Place, Suite 100 Phoenix, AZ 85044 Toll Free: 877.835.4426 Phone: 480.753.5444 Fax: 480.753.5450 Website: www.telgian.com

Primary Products/Services:

Fire, Security, Life Safety Consulting and Engineering/Design Services, Life Safety Systems Testing and Inspection, Security Compliance Solutions

Market Area:

U.S., Canada, Mexico, Latin America, Caribbean Hours of Operation:

M-F 8:00 a.m.-5:00 p.m. local time

Management:

Russell Leavitt, Executive Chairman Jim Tomes, President and CEO Brian Ballard, CFO

Telgian Engineering and Consulting:

Leonard Remo, President Telgian Fire Safety: Al Gargano, President Telgian Management Technologies: Eddie Kennedy, President TEL: 480.753.5444 FAX: 480.753.5450

Company Profile:

Since 1985, Telgian has served as a trusted partner to clients around the globe, providing innovative fire, security, life safety consulting and engineering/design services, keeping facilities safe, compliant and on budget.

Headquartered in Phoenix, AZ with seven regional offices across the nation, Telgian provides service throughout the US and abroad. We offer our clients a comprehensive, singlesource solution for all of their fire protection, security and life safety needs. Telgian is comprised of:

Telgian Engineering And Consulting is a fullservice global engineering/risk mitigation consultancy specializing in complex, multidiscipline projects. Since 1985, Telgian has partnered with architects, engineers, developers, risk/facility management firms, construction teams and government agencies to provide services for the protection of people, property, information, and organizational mission against preventable losses.

Telgian Fire Safety provides professional Life Safety Systems testing, inspections and repair to 45,000+ locations annually. Expertise includes Fire Sprinkler, Fire Alarm and Clean Agent Systems, Fire Extinguishers, Kitchen Hood Suppression Systems, Backflow Systems, Emergency/Exit Lights, Special Hazards and Fire Alarm Monitoring, plus Inventory Tracking, Capital Replacement Programs, and Budgeting/Forecasting.

Telgian Management Technologies is a supplier of software for management of CFATS/RCSC compliance regulation requirements/best practices. TMT's cloud-based relational database application, Telgian Compliance Manager (TCMTM), tracks security compliance solutions, provides real-time secure data management, allows submission/tracking of forms/reports, adheres to 50+ global compliance IT standards and includes denial-of-services protection.

OFFICES:

ATLANTA

900 Circle 75 Parkway, Ste. 680 Atlanta, GA 30339 P: 770.432.3882 F: 480.656.3114

CHICAGO

1020 N. Milwaukee Avenue, Suite 365 Deerfield, IL 60015 P: (480) 621-5005

DETROIT

33300 5 Mile Road, Ste. 106 Livonia, MI 48154 P: 734.738.1111 F: 734.738.1112

HOUSTON 2929 Allen Parkway, Suite 200 Houston, TX 77019 P: 480.753.5444 F: 480.753.5450

SAN FRANCISCO

2603 Camino Ramon, Suite 200 San Ramon, CA 94583 P: 925.786.0498

SEATTLE

19009 33rd Avenue West, Suite 206 Lynnwood, WA 98036 P: 480.656.3112 F: 480.753.5450

WILMINGTON

4001 Kennett Pike, Suite 308 Wilmington, Delaware 19807 P: 302.300.1400

TOLCO™, a Brand of Eaton

509 West Monroe Highland, Illinois 62249 Tel: 800.851.7415 FAX: 800.356.1438 Website: www.Eaton.com/TOLCO Email: SeismicQuotes@Eaton.com

Founded:

1967

Primary Products/Services:

Seismic bracing, pipe hangers, strut systems, cable ladder/tray for MEP and Fire Protection, Engineering services and resources, and TOLBrace™ Software

Market Area:

Worldwide

Titus Industrial

14580 Midway Road Farmers Branch, Texas 75244 Tel: 469.289.1773 Website: www.titusindustrial.com

Total Equipment

400 5th Coraopolis, Pennsylvania 15108 Tel: 412.269.0999 Website: www.totalequipment.com

Trademaster, Inc.

550 Stephenson Highway Ste 330 Troy, Michigan 48083 Tel: 586.899.8651 Website: www.mobile0eyes.com

United Brass Works, Inc.

714 South Main Street Randleman, North Carolina 27317 Tel: 800.334.3035 Fax: 800.498.4696 Email: jim.sattler@ubw.com Website: **www.ubw.com**

Founded: 1910

Primary Products/Services: bronze valves / custom cast and machined products

Market Area: Worldwide

Hours of Operation: 8:00 a.m. - 5:00 p.m. Mon.-Fri.

Management: Mike Berkelhammer, President

Sales Contact: Jim Sattler, Sales Manager Email: sales @ubw.com

Company Profile:

United Brass Works, Inc manufactures a wide range of bronze and ductile iron valves for fire sprinkler applications.

Uponor Inc.

5925 148th Street West Apple Valley, Minnesota 55124-8197 Tel: 800.321.4739 Website: www.uponor-usa.com Email: kate.olinger@uponor.com

Founded:

1620

Primary Products/Services: Residential Fire Sprinkler Systems Market Area: North America

Management:

Kate Olinger, Sr. Manager, Residential Segment

Company Profile:

Uponor AquaSAFE™ fire sprinkler systems are PEX-based solutions listed to UL 1821 that provide flexible options for NFPA 13D applications, including multipurpose, standalone and exposed applications. Uponor provides exceptional support, including design services with NICET IV certified drawings as well as training for installers and education for AHJs to get your projects completed efficiently and effectively.



Victaulic Company

4901 Kesslersville Road Easton, Pennsylvania 18040 Toll-Free: 800.PICK.VIC Website: www.victaulic.com

Founded:

1925 Market Area: Global

Management:

Scott Howser, V.P., Market Dev.

Company Profile:

As the world's leading producer of grooved mechanical pipe-joining systems, Victaulic works collaboratively with its customers and affiliates worldwide to deliver innovative solutions across our core business areas. Our products and services put people to work faster while increasing safety, ensuring reliability and maximizing efficiency and sustainability. Visitwww.victaulic.com and follow us on LinkedIn, Facebook, Twitter, and YouTube.



The Viking Group

210 N. Industrial Park Drive Hastings, Michigan 49058 Telephone: 269.945.9501 Toll Free: 800.968.9501 FAX: 269.945.9599 Website: www.vikinggroupinc.com

Founded:

1897

Primary Products/Services:

- Fire Sprinklers and Systems
- Fire Protection Valves
- CPVC Pipe and Fittings
- Fabrication Services
- Grooved Piping System
- Steel Pipe
- Threaded Fittings
- Hangers & Fasteners
- Electrical Products

- Foam Systems
- FDC Equipment
- Backflow Prevention
- Tools & Accessories
- Market Area: Worldwide

Hours of Operation: 24/7/365

Management:

James Golinveaux, President and CEO, Viking Group, Inc. Joe Bardowski, Vice President – Operations, Viking SupplyNet Tom O'Connor, President – Viking Manufacturing Mike Bosma, Executive Vice President – International Sales, Viking SupplyNet Chris Sharp, Vice President – Strategic Partnerships, Viking Group, Inc. James Lake, Vice President – Training & Technical Services Martin Workman, Vice President – Product Management

Sales Contact:

Jeff Norton, Vice President - Marketing, Viking Group, Inc. Tel: 269.945.8312

Company Profile:

Together, the companies of The Viking Group (Viking Corporation, Viking SupplyNet, Viking Fabrication Services, and Viking Plastics) provide integrated solutions for any fire protection challenge. With a comprehensive range of products and services, Viking provides much more than fire protection hardware. We help streamline the work of our customers. We help improve their quality of service. We help them grow their business.

The experience of our employees, our commitment to advancing fire protection technology, and our high-quality, worry-free products and services all make Viking the single-source supplier for thousands of customers worldwide.

BRANCH OFFICES: UNITED STATES OF AMERICA

The Viking Corporation 210 N. Industrial Park Drive Hastings Michigan 49058 Telephone: 800-968-9501 Fax: 269-945-9599 products@vikingcorp.com

VIKING SUPPLYNET - WEST REGION

Viking SupplyNet (Los Angeles) Regional Headquarters 9101 Sorensen Ave. Santa Fe Springs, CA 90670 Telephone: 562-903-7274

Fax: 562-944-1058 west@supplynet.com

Sales Contact: Dave Swanson, Jim Gudger, Jeff Hill

Viking SupplyNet (Phoenix)

625 E. Watkins Street Phoenix, AZ 85004 Telephone: 602-252-0400 Fax: 602-252-2028 west@supplynet.com

Sales Contact: Kevin Kane, Jeff Hill

Viking SupplyNet (Bay Area)

1164 San Luis Obispo Hayward, CA 94544 Telephone: 510-429-7295 Fax: 510-429-7297 west@supplynet.com

Sales Contact:

Augustine Raya, Jeff Hill

Viking SupplyNet (Las Vegas)

Cameron Business Center #1, 4701 Cameron Street, Suite D Las Vegas, Nevada 89103 Telephone: 702-795-8002 Fax: 702-795-0105 west@supplynet.com

Sales Contact: Jim Gudger, Jeff Hill

Viking SupplyNet (Seattle)

8001 S. 224th Street Kent, WA 98032 Telephone: 253-872-8444 Fax: 253-872-8455 west@supplynet.com

Sales Contact: Dave Luckenbach, Jeff Hill

Viking SupplyNet (Denver)

12360 E. 46th Avenue #400 Denver, CO 80239 Telephone: 303-576-0665 Fax: 303-576-0611 west@supplynet.com Sales Contact:

Scott Franklin, Jeff Hill

Viking SupplyNet (Riverside)

6480 Box Springs Blvd. Riverside, California 92507 Telephone: 951-656-3111 Fax: 951-656-2606 west@supplynet.com

Sales Contact:

Jim Gudger, Dave Swanson, Jeff Hill

VIKING SUPPLYNET - CENTRAL REGION

Viking SupplyNet (Columbus)

Regional Headquarters 2353 International Street Columbus, OH 43228 Telephone: 614-527-5800 Fax: 614-527-5818 midwest@supplynet.com

Sales Contact:

Bob Fischer, Tom Bowers

Viking SupplyNet (Detroit) 26020 Mound Road

Warren, MI 48091 Telephone: 586-754-0004 Fax: 586-754-8020 Midwest@supplynet.com

Sales Contact: Sandy Richter, Tom Bowers

Viking SupplyNet (Chicago)

640 Center Avenue Carol Stream, IL 60188 Telephone: 630-462-5860 Fax: 630-871-1898 northcentral@supplynet.com

Sales Contact: Ron Bergquist, Tom Bowers

Viking SupplyNet (St. Louis)

1600 Park 370 Place, Suite 10 Hazelwood, MO 63042 Telephone: 314-291-4800 Fax: 314-291-4806 northcentral@supplynet.com

Sales Contact:

Chris Muschany, Tom Bowers

Viking SupplyNet (Kansas City)

1930 Warren Street North Kansas City, MO 64116 Telephone: 816-474-1190 Fax: 816-474-8991 northcentral@supplynet.com

Sales Contact: Chris Muschany, Tom Bowers

Viking SupplyNet (Twin Cities)

305 Bridgepoint Drive, Suite 200 South St. Paul, MN 55075 Telephone: 651-455-0325 Fax: 269-818-1614 northcentral@supplynet.com Sales Contact:

Jason Wardour, Tom Bowers

Viking SupplyNet (Houston)

6911 Fairbanks North Houston Road, Suite 100 Houston, TX 77040 Phone: 713-896-8464 Fax: 713-896-8429 south@supplynet.com

Sales Contact: Mike Repking, Tom Bowers

Viking SupplyNet (Dallas)

1011 N. 28th Avenue, Suite 200 Irving, TX 75261 Telephone: 972-466-0933 Fax: 972-466-0853 south@supplynet.com

Sales Contact: Perry Adams, Wes Nolley, Tom Bowers

Viking SupplyNet (San Antonio)

1050 Arion Parkway, Suite 110 San Antonio, TX 78216 Telephone: 210-491-2023 Fax: 269-818-1607 south@supplynet.com

Sales Contact: Blake Johnson, Tom Bowers

VIKING SUPPLYNET - EAST REGION

Viking SupplyNet (New Jersey)

Regional Headquarters 4B Cranberry Road Parsippany, NJ 07054 Telephone: 973-541-2580 Fax: 269-818-1639 east@supplynet.com

Sales Contact:

Terry Laffey

Viking SupplyNet (Atlanta)

Regional Headquarters 100 Piedmont Court, Suite A Doraville, GA 30340 Telephone: 770-446-3068 Fax: 770-446-3713 south@supplynet.com

Sales Contact:

Wes Letson

Viking SupplyNet (New York City) 56-75 49th Street, Suite B Maspeth, NY 11378 Telephone: 973-541-2320 Fax: 269-818-1609 east@supplynet.com

Sales Contact: Vincent Vario, Terry Laffey

Viking SupplyNet (Philadelphia) 201 King Manor Drive King of Prussia, PA 19406 Telephone: 610-279-3762

Fax: 610-277-3658 east@supplynet.com

Sales Contact:

Jamey Wright Viking SupplyNet (Boston) 60 Maple Street Mansfield, MA 02048 Telephone: 508-594-1800 Fax: 269-818-1620 east@supplynet.com

Sales Contact:

Bill Wian

Viking SupplyNet (Baltimore / Washington)

8310 Sherwick Court Jessup, Maryland 20794 Telephone: 301-490-5514 Fax: 301-490-5367 east@supplynet.com

Sales Contact:

Jamey Wright

Viking SupplyNet (Richmond)

4593 Carolina Avenue Richmond, Virginia 23222 Telephone: 804-228-1107 Fax: 804-228-1556 east@supplynet.com

Sales Contact:

Ben Johnson

Viking SupplyNet (Memphis)

Airport Distribution Center #8, 4299 Air Trans Road Memphis, TN 38118 Telephone: 901-360-9401 Fax: 901-360-9428 south@supplynet.com

Sales Contact:

Tommy Haberman

Viking SupplyNet (Nashville)

555 Brick Church Park Drive Nashville, TN 37207 Telephone: 615-255-8393 Fax: 612-256-0062 south@supplynet.com

Sales Contact: Larry McNamara

Viking SupplyNet (Charlotte)

11517 Cordage Street, Suite P Charlotte, NC 28273 Phone: 704-588-8880 Fax: 704-588-8650 south@supplynet.com

Sales Contact: Seth Pendleton

Viking SupplyNet (Orlando) 503 Ocoee Business Parkway Ocoee, FL 34761 Telephone: 407-656-7600 Fax: 407-656-7675 south@supplynet.com

Sales Contact:

Ted Collazo Viking SupplyNet (Ft. Lauderdale) 2678 SW 36th Street Fort Lauderdale, FL 33312 Telephone: 954-791-1756 Fax: 954-791-1614 south@supplynet.com Sales Contact:

Alejandro Garcia

VIKING FABRICATION SERVICES U.S. LOCATIONS

Viking Fabrication Services (Southern California) 6480 Box Springs Blvd. Riverside, California 92507 Telephone: 951-656-3111

Fax: 951-656-2606 vfsriverside@supplynet.com

Sales Contact: Dave Swanson, Jim Gudger, Jeff Hill

Viking Fabrication Services (Phoenix) 625 E. Watkins Street

Phoenix, Arizona 85004-2935 Telephone: 602-252-0400 Fax: 602-252-2134 vfsphoenix@supplynet.com

Sales Contact:

Kevin Kane, Jeff Hill

Viking Fabrication Services (Denver)

12360 E. 46th Avenue #400 Denver, Colorado 80239 Telephone: 303-576-0665 Fax: 303-576-0611 vfsdenver@supplynet.com

Sales Contact:

Scott Franklin, Jeff Hill

Viking Fabrication Services (Bay Area) 1164 San Luis Obispo Street Hayward, CA 94544 Telephone: 510-429-7295 Fax: 510-429-7297 vfshayward@supplynet.com

Sales Contact: Augustine Raya, Jeff Hill

Viking Fabrication Services (Chicago) 640 Center Avenue Carol Stream, IL 60188 Telephone: 630-462-5860 Fax: 630-871-1898 vfschicago@supplynet.com Sales Contact:

Ron Bergquist, Tom Bowers

Viking Fabrication Services (Columbus) 2353 International Street Columbus, Ohio 43228 Telephone: 614-527-5800 Fax: 614-527-5818 vfschicago@supplynet.com

Sales Contact: Bob Fischer, Tom Bowers

Viking Fabrication Services (Kansas City) 1930 Warren Street North Kansas City, MO 64116 Telephone: 816-474-1190 Fax: 816-474-8991 northcentral@supplynet.com

Sales Contact: Chris Muschany, Tom Bowers

Viking Fabrication Services (New York Metro / New Jersey) 4B Cranberry Road Parsippany, NJ 07054 Phone: (973) 541-2580 Fax: (269) 818-1639 vfsnewyorkmetro@supplynet.com

Sales Contact:

Terry Laffey

Viking Fabrication Services (Richmond) 4593 Carolina Avenue Richmond, Virginia 23222 Telephone: 804-228-1107 Fax: 804-228-1556 vfsrichmond@supplynet.com

Sales Contact:

Ben Johnson

Viking Fabrication Services (Atlanta) 100 Piedmont Court, Suite A Doraville, GA 30340 Telephone: 770-446-3068 Fax: 770-446-3713 vfsatlanta@supplynet.com

Sales Contact:

Wes Letson

Viking Fabrication Services (Houston) 6911 Fairbanks North Houston Rd., Suite 100 Houston, TX 77040 Phone: (713) 896-8464

Fax: (713) 896-8429 vfshouston@supplynet.com Sales Contact:

Mike Repking, Tom Bowers

Viking Fabrication Services (Dallas)

1011 N. 28th Avenue, Suite 200 Irving, TX 75261 Telephone: 972-466-0933 Fax: 972-466-0853 south@supplynet.com

Sales Contact:

Perry Adams, Wes Nolley, Tom Bowers

CANADA

Viking SupplyNet (Toronto)

325 Vaughan Valley Blvd. Woodbridge, Ontario L4H 3B5 Phone: (905) 856-3557 Fax: (905) 856-3558 toronto@supplynet.com

Sales Contact:

Wayne Brown, Scott Tanner

Viking SupplyNet (Vancouver)

19650 Telegraph Trail Bldg B Unit 1 Langley, British Columbia V1M3E5 Phone: (604) 882-2766 Fax: (604) 882-2762 vancouver@supplynet.com Sales Contact: Nicole Andreassen, Scott Tanner

Viking SupplyNet (Calgary)

#42 4216 54th Avenue SE Calgary, Alberta T2C 2E3 Phone: 403-203-5681 Fax: 403-203-5682 calgary@supplynet.com

Sales Contact:

Scott Tanner

SCS Canada (Quebec) - Independent

Distribution Partner 1935 Lionel Bertrand Blvd. Boisbriand, Quebec J7H 1N8 Telephone: 450-430-7031 Fax: 450-430-9170 scs@polygon.ca

MEXICO

Viking SupplyNet 1011 N. 28th Avenue, Suite 200 Irving, TX 75261 Telephone: 972-466-0933 Fax: 972-466-0853 latinamerica@supplynet.com

Sales Contact: Pedro Valdez

LATIN AMERICA AND THE CARIBBEAN

Viking SupplyNet

2678 SW 36th Street Fort Lauderdale, FL 33312 Telephone: 954-791-2901 Fax: 954-791-1181 latinamerica@supplynet.com

Sales Contact:

Alejandro Garcia

ADDITIONAL LOCATIONS – EUROPE AND MIDDLE EAST

Europe - Headquarters

Viking EMEA Zone Industrielle Haneboesch L-4562 Differdange/Niedercorn, Luxembourg Telephone: +352-58-37-37-1 Fax: +352-58-37-36 vikinglux@vikingcorp.com

ADDITIONAL LOCATIONS – EUROPE

- France
- The Netherlands
- Luxembourg
- Germany
- Romania
- Poland
- Sweden (Stockholm)
- Sweden (Knivsta- fabrication)
- Italy
- Spain
- United Kingdom (Epworth)
- United Kingdom (West Midlands)
- United Arab Emirates
- Turkey
- Israel
- Russia

ASIA – HEADQUARTERS

The Viking Corporation (Far East) Pte. Ltd. 69 Tuas View Square Westlink Techpark Singapore 637621 Tel: (+65) 6 278 4061 Fax: (+65) 6 278 4609 vikingsingapore@vikingcorp.com

Additional Locations – Asia

- Japan
- Hong Kong
- Korea
- China (Shanghai)
- India (Bangalore)
- India (New Delhi)

SOUTHERN HEMISPHERE LOCATIONS

Australia (Independent Distribution Partner) Viking Fire Protection Supplies Pty. Limited 95 - 99 Hardys Road, Underdale SA 5032, Australia Telephone: +61-8-8352-2888 Fax: +61-8-8352-2755 fireprot@e-access.com.au

Sales Contact:

Rick Tanner, Patrick Conway South Africa (Independent Distribution Partner)

Firequip CC

P.O. Box 14579, Bredell 1623, South Africa Telephone: +27-11-396-1800 Fax: +27-11-396-1810 dave@firequip.co.za

Sales Contact:

Dave Martin New Zealand (Independent Distribution Partner)

Viking Sales & Services Limited

12 Cornish St, Korokoro Lower Hutt 5012 P.O. Box 30737, Lower Hutt 5040, New Zealand Telephone: +64-4-589-0856 Fax: +64-4-589-0413 vikingnewzealand@vikingcorp.com

Sales Contact:

Peter Clark, Patrick Conway

Viking Sales & Services – Auckland

Unit 4, 17 Airpark Drive Airport Oaks, Auckland 2022 New Zealand Tel: (+64) 9 969 9009 Fax: (+64) 9 969 9007 vikingnewzealand@vikingcorp.com

Water Storage Tanks, Inc.

PO Box 942 Dripping Springs, Texas 78620 Tel: 512.516.4304

Watts

815 Chestnut Street North Andover, Massachusetts 01845 Tel: 978.688.1811 Fax: 978.794.1848 Website: www.watts.com

Management:

Ken Nolan, National Product Manager

Company Profile:

Founded in 1874, Watts, part of the Watts Water Technologies family, is one of the world's largest independent valve companies with 10 factories in the United States and Canada. Watts Regulator designs, manufactures, and sells an extensive line of flow control products for the water quality, residential plumbing and heating, commercial and OEM markets.



Wheatland Tube Company

700 S. Dock Street Sharon, Pennsylvania 16146-1836 Toll Free: 800.257.8182 Email: bob.bussiere@wheatland.com Website: www.wheatland.com

Founded:

1877

Primary Products/Services:

Tubular steel products, electrical conduit, steel sprinkler pipe, fence framework, standard pipe Market Area: Nationwide

Hours of Operation:

7:00 a.m.-5:00 p.m./7 days

Management:

Barry M. Zekelman, Exec. Chair & CEO Kevin Kelly, Pres, Wheatland Tube, Pipe Division Bob Bussiere, G.M., Sprinkler Sales

Sales Contact:

Bob Bussiere, GM Fire Sprinkler Sales Email: bob.bussiere@wheatland.com

Company Profile:

Wheatland Tube manufactures the industry's most complete line of steel sprinkler pipe. Our coating options set the standard for resistance to exterior corrosion and heat. With a complete line of fire sprinkler pipe, we guarantee our steel pipe is compatible with any fire protection system that only uses steel pipe. The Wheatland Advantage is dedicated to providing our customers with an unparalleled product, our fire sprinkler pipe is:

- 100% Steel
- Made in USA
- Hot-dipped galvanized to prevent dross and ensure a smooth ID finish
- Exclusively double-sealed and packaged for shipping

Wilkins, a Zurn Company

1747 Commerce Way Paso Robles, California 93446 Tel: 805.238.7100 Fax: 805.238.5766 Website: www.zurn.com

Founded:

1906

Primary Products/Services: Valves for Fire Suppression Systems

Market Area:

Worldwide Hours of Operation: 6:30 a.m. - 5:00 p.m. PST Mon..Fri.

Management:

Chris Connors, General Manager Rick Fields, Vice President, Sales & Marketing Mike Mallas, Sales Manager Fire Protection Rachael Wiley.Steffen, Director of Brand Marketing

Sales Contact:

Paul Wait, National Sales Manager Tel: 805.226.6296 FAX: 805.238.5766

Company Profile:

Wilkins offers a complete line of American made factory set, easy field adjustable, and master zone control valves. Available in $1\frac{1}{2}$ " – 6" sizes, in angle and inline pattern and threaded, flanged, and grooved connections.

ZCL/Xerxes

7 Glen Oak Court Chico, California 95926 Tel: 530.864.0438 Website: www.zcl.com





GOVERNING MEMBERS 2018 - 2019

AGF Manufacturing Inc. 100 Quaker Lane Malvern, PA 19355 USA Tel: +1 610.240.4900 Contact: James McHugh

Anvil/Flexhead Industries

56 Lowland Street Holliston, MA 01746 USA Tel: +1 800.829.6975 Contact: Mike Dooley

Job GmbH

Kurt.Fischer.Str. 30 Ahrensburg, Hamburg D22926 Germany Tel: +49 4102.2114.0 Contact: Bodo Mueller

Johnson Controls, Fire Suppression

5757 N. Green Bay Avenue Milwaukee, Wisconsin 53201 USA Tel: +1 715.735.7411 Contact: Mark Fessenden

Underwriters Laboratories LLC

Reliable Automatic Sprinkler Company

333 Pfingsten Road Northbrook, IL 60062 USA Tel: +1 847.664.2629 Contact: Kerry Bell

103 Fairview Park Drive

Elmsford, NY 10523 USA

Tel: +1 914.829.2100

Contact: Kevin T. Fee

FM Approvals

1151 Boston Providence Turnpike Norwood, MA 02062 USA Tel: +1 781.255.4810 Email: information@ fmapprovals.com Contact: Paris Stavrianidis

General Air Products, Inc.

118 Summit Drive Exton, Pennsylvania 19341 USA Tel: +1 610.524.8950 Contact: Ray Fremont

Globe Fire Sprinkler Corporation

4077 Air Park Drive Standish, Michigan 48658 USA Tel: +1 989.846.4583 Contact: Steven Worthington

Lubrizol Advanced Materials

9911Brecksville Road Brecksville, Ohio 44141 USA Tel: +1 216.447.6268 Contact: Mark Knurek

Minimax GMBH

KG IndustriestraBe 10/12 Postfach 1260 Bad Oldesloe D.23840 Germany Tel: +49 45 318 03 252 Contact: Klaus Hoffman

Potter Electric Signal Company

1609 Park 370 Place Hazelwood, Missouri 63042 USA Tel: +1 314.878.4321 Contact: Bruce LaRue

Victaulic

4901 Kesslersville Road PO Box 31 Easton, Pennsylvania 18044 USA Tel: +1 610.559.3300 Contact: Larry Thau

Viking Group

210 Industrial Park Dr Hastings, Michigan 49058-9706 USA Tel: +1 800.968.9501 Contact: Mike Bosma

Weflo Valve Co., Ltd

Huadong Road and Chunyang Road Qingdao National High-tech Industrial Development Zone China, 266111 Tel: +352 621.353.588 Contact: Dominique D'antonio

NFSA PROFESSIONAL MEMBERS GUIDE

Naim Ali D'Abadie, West Indies

David Arvin Springfield, OH

Vinny Bove Wading River, NY

Tom Christman Knoxville, Tennessee

Kathryn Cifa Ashburn, Virginia

Jeff Ferguson Indianapolis, IN

BUSINESSES

ABG Contracting

315 White Avenue Cove City, North Carolina 28523 Phone: 252-649-6774 Contact: William Jones Email: jonesfireprotection@yahoo.com

Accént Fire Engineering International, Ltd.

4001 Office Court Dr. Ste 606 Santa Fe, NM 87507 Phone: 800-503-1961 FAX: 505-474-4184 Email:accentfire@aol.com Contact: Jerry D. Watts, M.S.F.P.E., President

Services:

Licensed fire protection engineers (AZ, CA, CO, NM, NV, NY, MD, TX); Certified inspectors/ investigators (C.FI.); Plans review and design.

Accord Solutions Group, LLC

233 SW Greenwich Drive #145 Lees Summit, Missouri 64082 Phone:913-735-0373 Contact: Brandon Folse

INDIVIDUALS

J.D. Harpole, III Kent, WA

Sezgin Mafizer Islip Terrace, NY

Peter Neilio Atlantic Beach, FL

Kristen Nich Wenham, MA

Danette Parker Lubbock, Texas

Nelcol Philip New York, New York

AEI Corporation

8197 W Brandon Drive Littleton, CO 80125 Phone: 303-339-3240 Fax:303-756-2911 Contact: Charlie Sullivan Email: charlie@aeiengineers.com

Allianz Risk Consulting, LLC

PO Box 3331 Iowa City, IA 52244 Phone: 319-354-9800 FAX: 319-538-0258 Contact: Traci Huffman Email: traceh67@mchsi.com

Alvine Engineering

1201 Cass Street Omaha, NE 68102 Phone: 402-346-7007 website:www.alvine.com Contact: Nicholas Bernard Email: nbernard@alvine.com **Angela Sosnosky** Youngstown. OH

Edward Raczkowski Flushing, NY

Jeffrey Smith Babylon, NY

Eric Tatum, Sr. Arlington Heights, IL

Apex Safety Solutions, LTD

Unit One Deacon House Leeward Hwy Providenciales, TCI TKCA 1ZZ Phone: 1-649-342-6824 Contact: Khama Coalbrooke

Aquatech, Inc.

680 Heacock Rd. Ste. 204 Yardley, PA 19067-6346 Phone: 215-783-5510 FAX: 215-790-0404 Contact: Rocco Dillio Email: rdillio@aq2000.com

As-Tech Industries, Inc.

2016 Sabinal Street Mission, TX 78572 Phone: 609-442-3372 Contact: Greg Loomer

Associates Engineering Systems LLC

5445 Wakefield Ave. Mount Pleasant, WI 53406 Phone: 262-898-9160 Website: www.associatesengineering.com Contact: Mark E. Miller, P.E., President Services: Consulting and design of fire protection systems. Please see website for details.

Astor Park Designs

1721 Villa Contesa Drive NW Los Lunas, NM 87031 Phone: 920-883-1047 Contact: Samuel Nelson

Automatic Fire Suppression Design

4622 Cleveland Avenue Saint Louis, MO 63110 Phone:314-226-6454 Contact: William Woodward

Baja Design Engineering S.C.

1224 Jasmine Street Calexico, CA 92231 Phone: 686-905-9855 Website: www.bajadesign.com.mx Contact: Frank Guzman email: fguzman@globalmechanical.com.mx

Products/Services:

Fire protection systems. Systems designed according to international codes, norms and local ordinances on fire protection. Automatic sprinkler systems.

Protection systems with hose cabinets. Pumping systems and storage tanks. Special extinguishing systems. Special risks, Hydraulic calculations. Seismic calculations. Fire Alarm systems. We provide engineering to develop special projects of fire protection alarms. Notification systems (pull-down stations and sirens). Monitoring systems and sprinkler systems, supervision, pumping equipment and water reservoir tanks. Smoke detection systems, directional/conventional. Projected beam detection, detection by smoke aspiration. Special gases detection. Intelligent control panels, Remote events monitoring. Smoke Control and handling.

Battelle Energy Alliance

1955 Fremont Avenue Suite 550 Idaho Falls, Idaho 83402 Phone: 208-526-2842 Contact: Michael Cates, Spence Carter, Dustin Stokes, Norman Reece, David Young

BCE Engineers, Inc

6021 12th Street E. Ste. 200 Fife, WA 98424 Phone: 253-922-0446 FAX: 253-922-0896 Contact: Fred Blanchard

BCER Engineering

5420 Ward Road Arvada, CO 80002 Phone: 303-422-7400 Contact: Savannah Donarski, Randy Day

Benchmark Group, Inc.

1805 N 2nd Street Rogers, AR 72756 Phone:479-986-1230 Contact: Orrin Marcano Email: ohm@teamofchoice.com

BMT Engineering, P.C.

333 West Main Street Boonton, NJ 07005 Phone: 973-331-5121 FAX: 973-331-0544 Contact: Thomas Bravante, P.E., President Services: Full service fire protection engineering firm.

Bouthillette Parizeau Inc.

9825 Rue Verville Montracl, Canada H3L 3E1 Phone: 514-292-8057 Contact: Jean-Luc Riopel

BRG Fire Sprinkler Design

12650 Blosser Road North Lima, Ohio 44452 Phone: 330-207-4312 Contact: Benjamin Pahanish

Brickstreet Insurance

519 Coal Valley Road Jefferson Hills, PA 15025-3751 Phone: 412-418-6236 Name: Ronald Lucarelli

Brodz Sale & Engineering Company

10751 Indian Head Industrial Blvd. St. Louis, MO 73132-1101 Phone: 314-890-8201 Contact: Robert Carey

Builder's Book, Inc.

8001 Canoga Ave Canoga Park, CA 91304 Phone: 818-887-7828 Fax: 818-887-7990 Contact: Oussa Awad Email:sales@buildersbook.com

Burns and McDonnell

8201 Norman Center Drive Suite 300 Bloomington, MN 55437-3460 Phone: 612-781-3827 Contact: Paul Watercott

Calico-Sterling Company

1015 Acacia Lane Davis, CA 95616-3213 Phone: 530-219-1960 Contact: William Greene Email: billgreene@calico-sterling.com Products/Services: Fire Protection Consultant

Carlson Design

55 Red Stone Drive Weatogue, CT 06089-9608 Phone: 860-651-0622 Fax: 860-651-1221 Contact: Leslie Carlson

CDM Smith

125 S. Wacker Dr. Ste 700 Chicago, IL 60606-4437 Phone: 312-346-5000 Contact: April Ricketts, Owner

Centerline Design, LLC

6361 W. 800 N. McCordsville, IN 46055 Phone: 317-410-2200 Contact: Patrick Murray, Owner Email: pmurray@centerlinedesignllc.com

Central Kitsap School District

9102 Dickey Road NW Silverdale, WA 98383-8860 Phone: 360-443-0473 Contact: Winston Danseco Email: winstond@ckschools.org

Certified Design Systems, Inc.

14609 S. Woods Landing Draper, UT 84020 Phone: 801-878-9008 FAX: 801-878-9008 Contact: Jeff Johnson, President

Charles G. Michel Engineering PC

470 Mamaroneck Ave. Ste 411 White Plains, NY 10605 Phone: 914-949-5112 FAX: 914-949-5116 Contact: Charles Michel Email: cmichel@cgmengineering.com

Cromalox 1347 Heil Quaker Blvd.

Lavergne, TN 37086-3518 Phone: 615-213-8173 Contact: Chris Myers

Cinnco, Inc. 621 E. Grand Ave. Fruita, Colorado 81521 Phone: 970-261-0660 Contact: Gary Curtis Email: gcurtis@cinnco.com

City of Decatur

1 Gary K Anderson Plz Decatur, IL 62523-1005 Phone: 217-424-2787 Contact: Eric Watkins

Cloninger Consulting

2793 Lake Shore Road South Denver, NC 28037 Phone: 714-616-7425 Contact: Richard Cloninger Email: cloningers@msn.com

Code Consultants, Inc.

2043 Woodland Parkway, Ste 300 St. Louis, Missouri 63146 Phone: 314-991-2633 Fax: 314-991-4614 Website: www.codeconsultants.com Contact: Will Smith, FPE

Services:

Internationally recognized fire protection and life safety consulting firm, providing a diverse range of crucial fire protection and life safety consultation and design services.

Codes-Based Solutions, LLC

1224-B Columbia Ave. Ste 110 Franklin, Tennessee 37064 Phone (615) 804-1349 Website: www.codesbasedsolutions.com Email: rtrotter@codesbasedsolutions.com Contact: Robert Trotter, Owner, Sr. Fire **Protection Consultant**

Services:

Codes-Based Solutions, LLC. —an independent consulting firm specializing in a broad range of fire protection, life safety, and codes-based consulting services, locally and nationally. The firm provides codes-based solutions for the built environment and our expertise ranges from homes to high-rise.

Code Red Sprinkler Design, LLC

8101 Courthouse Hill Road Pocomoke City, MD 21851-3773 Phone: 443-880-4978 Contact: Adam Mason

Coffman Engineering

751 Osterman Dr #104 Bozeman, MT 59715 Phone: 406-582-1936 Website: www.coffman.com Contact: Mark Gouveia, Engineer

Consulting Engineering Services, Inc.

811 Middle St. Middletown, CT 06457 Phone: 860-632-1682 FAX: 860-682-1768 Contact: Delbert Smith, Jr. Principal

Cromwell AE

Address: 1300 E 6th Street Little Rock, AR 72202-2714 Phone: 501-372-2900 Contact: Brian Gerdwager

Crook County Building Dept.

300 NE 3rd St. Prineville, Oregon 97754-1919 Phone: 541-447-3211 Contact: Jeremy Thamert

Crossfire Group, Inc

15116 East 117th Avenue Brighton, CO 80603 Phone: 303-898-0301 Contact: Richard Dussart

Cuhaci and Peterson

1925 Prospect Avenue Orlando, FL 32814-6358 Contact: Anthony Bowers

Dave Watson Associates

1325 West Beecher Rd. Adrian, MI 49221 Phone: 517-263-8988 FAX: 517-263-2328 Contact: Dave Watson

Davidson Associates

PO Box 4002 Greenville, DE 19807 Phone: 302-994-9500 Fax: 302-994-3414 Contact: James Davidson Email: jdavidson@davidsonassociates.net

Davis Design Services

5508 Fountain Gate Rd. Knoxville, TN 37918 Phone:865-456-7466 Contact: Mark Davis

DeMars Fire Design

PO BOX 245 St. Bonifacius, MN 55375-0245 Phone: 952-451-9767 Contact: Gregory DeMars

Design Line

7910 171st Lane NW Ramsey, MN 55303 Phone: 763-274-0768 Cell:: 612-309-0554 Email: dsgline@aol.com Contact: Bruce Thomas, Owner Products/Services: All types of design @ 3D coordination. 31 years in the trade.

Design West Engineering

Address: 5294 Sierra Drive San Bernardino, CA 92407-3239 Phone: 818-519-2215 Contact: David Marghezi

DFPS, Inc.

5270 Princeton Road Liberty Twp, OH 45011-8412 Phone:513-887-0016 Fax:513-887-0059 Email: dfps@fuse.net Contact: Ralph Davidson Services: State of Ohio and NICET Certified, 48 years experience in all types of water based fixed fire sprinkler systems and associated appurtenances. Use AutoSPRINK for hydraulic calculations and input to Navisworks models.

Donald Mayo-Fire Protection Consultant, Inc.

150 Grove Circle Pleasant Hill, CA 94523 Phone: 925-933-6299 Fax: 925-933-6288 Website: www.donaldmayo.com Contact: Donald Mayo, President Services: Code consulting, fire detection & suppression systems specifications, risk and hazard assessment, plan review for code and standards compliance, property inspections and life safety analysis.

Down Home Sprinkler Design Code

17452 Hibiscus Avenue Lakeville, MN 55044 Phone: 952-212-99655 Contact: Daniel Haley

Draw 4 Me Fire Systems

4045 Almendro Ct. Modesto, California 95356 Phone: 209-543-6190 FAX: 866-927-3129 Contact: Aaron Juarez

Dyne Fire Protection Labs

2357 Ventura Drive Ste. 108 Woodbury, MN 55125-1944 Phone: 651-917-0644 Fax: 651-917-0644 Website: www.dyneusa.com Email: julie@dyneusa.com

Products or Services:

Dyne Fire Protection Labs is an independent compliance testing company serving customers throughout the world, and is ISO-9001 certified. Dyne specializes in testing Fire Sprinklers, Firefighting foam (NFPA and International Maritime Organization Standards), dry Chemical and Antifreeze Solution for Sprinkler Systems. Dyne Technologies makes it easy for you to stay compliant with critical NFPA 25 fire protection and safety codes by offering: Unmatched customer service, guaranteed 5 business day turn-around times for your test results, with 24 to 36 hour rush services available for most services. Free sample test kits for Standard Fire Sprinklers, Firefighting Foam, Dry Chemical and anti-freeze solution, Postage-paid ground shipping to you and for samples shipped t our lab from locations within the continental USA for most types of testing. Direct communication with our chemists and technical staff. Reports available to you by mail (report and laminated tank/system tag) or by email (pdf). Free reminder services. Online access to test reports. Dyne Fire Protection Labs...partnering fr protect lives and property by helping you meet your NFPA 25 testing requirements.

EAG Fire Systems

168 Wynntry Circle Henderson, NV 89074-3356 Phone: 702-371-9625 Contact: Eric Gonzales Email: eric@eagfiresystems.com

EBL Fire Engineering-Div. of EBL Engineers

8005 Harford Rd. Suite A Parkville, MD 21234 Phone: 410-668-8000 Fax: 410-668-8001 Contact: Jeffrey Paul McBride Email: jmcbride@eblengineers.com

Products/Services:

EBL's fire protection division includes licensed fire protection engineers specifically trained in risk analysis, hazard assessment and the design of fire protection and detection systems.

Edwin A. Kotak

PO Box 1679 Wellfleet, MA 02667-1679 Phone: 617-523-8227 ext 341 Contact: Edwin Kotak Jr.

Empire Fire and Safety

660 11th Street, Unit 203 Golden, CO 80401-0725 Phone: 312-310-1177 Contact: Brandon Friel

Engineered Design Group

31 Nathan Hale Pl. Freehold, NJ 07728-1386 Phone: 732-761-0108 FAX: 732-761-0109 Contact: Paul Schwartz

Engineered Fire Systems, Inc.

11832 Tammy Way Grass Valley, CA 95949 Phone: 530-274-9400 Fax: 530-274-9488 Website: www.efs1.com Email: eprice@efs1.com Contact: Eric Price, SET, President Products/ Service: Fire sprinkler system shop drawings, calculations and material lists.

Engineering Dynamics Corp.

900 Eha Street Wailuku, HI 96793 Phone: 808-242-1644 FAX: 808-242-0838 Contact: Douglas Gomes, P.E.

Escape Fire

3000 Centerville Road Little Canada, MN 55117-1105 Phone: 651-771-8874 Email: gregp@escapefire.com

Exponent

17000 Science Drive Suite 200 Bowie, MD 20715 Phone: 301-291-2525 Contact:Nicholas Nava Email:nnava@exponent.com

Exponent Inc.

17000 Science Dr. Ste. 200 Bowie, MD 20715 Phone: 301-291-2501 Fax: 301-291-2599 Contact: Richard Long, Jr., Principal Engineer & Office Director Website: www.exponent.com/fire_protection_ engineering Services: Provide engineering failure analysis and forensic fire protection engineering services for subrogation and litigation purposes. Also perform traditional fire/life safety evaluations/ analyses.

F2M Fire & Drafting Designs INC

PO Box 1044 Clifton Park, NY 12065-0803 Phone: 914-510-3236 Name: Fernandez McKenley Email: fernandez@f2mfadds.com

Fire Designs Concepts, LLC.

895 Millrace Way Sugar Hill, GA 30518 Phone: 678-478-2741 Contact: Ray Vance

Fire Design, Inc.

600 W. Bypass Hwy 19E Suite 202 Burnsville, NC 28714 Phone: 828-284-4772 Website: www.fire-design.com Contact: Cliff Whitfield, President Email: cliff@fire-design.com

Products/Services:

Established in late 2002, we provide fire sprinkler shop/submittal drawings prepared in 3D format using AutoSPRINK. Our team is comprised of NICET III & IV certified designers that have worked on projects of all sizes and complexities. We have specialized in 3D coordinated projects for the past nine years.

Fire Marshal Services

18442 County Road 13 Johnstown, CO 80534-9304 Phone: 970-619-0299 Contact: Joe Jaramillo

Fire Protechs, Inc.

512 Sanford Avenue Sanford, FL 32771 Phone: 407-608-5604 Contact: Chris West

Fire Protection Design Consultant

2294 Georgetown Circle Aurora, IL 60503 Phone: 630-638-0265 Contact: Joseph M. Henk, Fire Sprinkler Designer

Fire Protection Design, Inc.

14 Denver Dr. New City, NY 10956-2305 Phone: 845-634-2133 Fax: 845-623-1533 Contact: Michael Koutsoftas

Fire Protection Design, LLC

26 Hampshire Drive Hudson, New Hampshire 03051 Phone: 603-969-3191 Contact: Marc Ruggiero, Jason Machado Email: marc@getfiredesign.com, jason@ getfiredesign.com

Fire Protection Engineering

1062 Central Avenue Albany, NY 12205 Phone: 518-275-0791 Contact: Chris Geer

Fire Safety Consultants, Inc.

2420 Alft Ln. Elgin, IL 60124 Phone: 847-697-1300 Contact: Keith S. Frangiamore, President Email: kfrangiamore@firesafetyfsci.com

Fire Solutions Group

6 Ferndale Road Seven Valleys, PA 17360-9660 Phone: 312-351-5919 Contact: James Lynch Email: jlynch@firesolutionsgroup.com

Fire Suppression Design, Inc.

891 South Second Street Ronkonkoma, NY 11779 Phone: 631-885-5042 Fax: 631-737-3884 Contact: Howard Flood Email: HFlood6020@aol.com Services: Fire Suppression Design

Fire-Ex Systems Engineering, Inc.

500 N. 3rd St. Suite 112 Wausau, WI 54403 Phone: 715-359-5684 Website: www.firexsys.com Contact: Russ Slaby Email: russ@firexsys.com Services: Engineering & Design

What We Do:

On time, coordinated 3D design from plan or on-site survey anywhere in the world. Hydraulic calculation and/or analysis of new or existing systems for purposes of new design approval, occupancy changes or system evaluation. Production of detailed and pre-coordinated shop drawings for submittal to AHJ for approval, prefabrication and installation. AS-built drawings can be provided if desired as part of the order. Composite listing of all materials required to fabricate and install the system. In addition, we can provide a list of piping to be pre-fabricated and group by line and main designation. Pre-construction planning and preliminary drawing preparation. This can include help in developing budgets for the purpose of submitting project AFEs. Our company provides real world application and design intended for the prefabrication and finally installation by others. While we do not offer installation, we do provide completed design with stock lists and shop drawings that can be issued for true "apples to apples" bid results. You can be in control of your installation and know that every installer was bidding from plans and specs indicating material and an installation you have already approved.

Fireguard Inspection Agency

65 Richardson Court Montgomery, NY 12549 Phone: 877-618-6333 Fax: 212-937-2195 Contact: Martin Bowie Email: mbowe@fireguardnyc.com

Firestein & Firestein

5900 Sepulveda Suite 350 Van Nuys, CA 91411-2575 Phone: 818-785-1999 Contact: Martin Firestein

First Priority DKI

301 N Woodbury Street South Elgin, IL 60177 Phone: 847-931-1600 Contact: T.J. Seiffert

Flagship Fire

2810 Notre Dame Drive Titusville, FL 32780 Phone: 321-289-2889 Contact: Jeff Trew Email: jeffgtrew@gmail.com



Florida Fire Protection Consultants, Inc.

4330 Raggedy Point Rd Fleming Island, FL 32003 Phone: 904-579-1335 Email: jduke@flfire.com Website: www.flfire.com Contact: Jim Duke, President

Services:

Fire Protection Design and Consultation Services, 3 D BIM Coordination, Stocklisting.

Florida Fire Protection Associates Inc.

4781 N Congress Avenue Boynton Beach, FL 33426 Phone: 561-963-8258 Contact: Nick Scholaro

Florissant Valley Fire Protection District

661 Saint Ferdinand Street Florissant, MO 63031-5124 Phone: 314-837-8790 Contact:Cliff Robinson

Fluor Federal Solutions LLC

100 Fluor Daniel Drive Greenville, SC 29607 Phone: 703-351-6441 Contact: Dylan Reid

Fortier Engineering

5889 Forbes Avenue Suite 330 Pittsburgh, PA 15217-1652 Phone: 412-521-1880 Website: www.fortierengineering.com Contact: Daniel Fortier, Principal Email: dfortier@fortierengineering.com Services: Fire Suppression systems design, HVAC & Plumbing systems design, Energy Modeling, Commissioning & LEED consulting.

FP Engineering

2614 Canterbury Circle Rockledge, FL 32955-6524 Phone: 239-560-1404 Email: fpengineering@cfl.rr.com Products/Services: FLORIDA CONTRACTORS: Fire Sprinkler Systems review and certification by a qualified FP Engineer, for conformance with Florida's FAC 61G15.

Fullerton Fire Dept.

PO Box 1192 Yucca Valley, CA 92286 Phone: 760-401-0521 Contact: David Rodriguez

Furman Insurance Agency

1314 E. Atlantic Blvd. Pompano Beach, Florida 33060 Phone: 954-943-5050 FAX: 954-590-9964 Contact: Carlos Chinchilla

G. Tim Stone Consulting, LLC

117 Old Stage Rd. Essex Junction, VT 05452-2518 Phone: 802-434-2968 Contact: Tim Stone

Gagnon Engineering

2660 Daisy Rd. Woodbine, MD 21797.8126 Phone: 301-461-6949 Fax: 401-489-0140 Contact: Robert Gagnon

Global Fire Suppression

& Mechanical Products LLC 10634 Grand Riviere Dr. Tampa, FL 33647 Phone: 813-760-3860 Contact: George Benitez

Gray A & E, P.S.C.

10 Quality Street Lexington, KY 40507 Phone: 513-405-4405 Contact: Mike Rahe

Great Plains Fire Specialists. Inc.

106 S. 6th Street Plattsmouth. NE 68048 Phone: 402-660-8167 Email: jeremy@greatplanis-fire.com Website: http://greatplains-fire.com Contact: Jeremy Hadfield Services: Great Plains Fire Specialists, Inc. provides fire sprinkler submittal & shop drawings prepared in 3D format using AutoSPRINK design program. Our team of NICET level certified designers with broad knowledge of all water-based fire sprinkler system types. We focus on design, material, and labor costs on both new construction and site surveys. Complete listing of all materials necessary to fabricate and install a system can be provided. 3D coordination is offered as well. Also, we provide property loss control consulting for facility owners and fire protection consulting for engineering firms.

Great Lakes Fire Suppression

2650 Merchant Street Marinette, WI 54143 Phone: 715-587-8005 Contact: Ken Johnson

GSM Fire Design

6101 Chickaloon Dr. McHenry, IL 60050 Phone: 815-791-9100 Website: www.gsmfdinc.com Contact: Gene Melnytschuk Email: gene@gsmfdinc.com

Hakenwerth Fire Sprinkler Design

359 Shockdrake Ct. Wentzville, MO 63385 Phone: 636-332-9578 Email: hfsdesign@centuryPhone.net Contact: Tony Hakenwerth, Owner Services: Fire sprinkler system design.

Hampton Fire Design, LLC

4950 NW 55th Ct. Tamarac, FL 33319-3287 Phone: 954-994-6692 Contact: Jim Hampton Email: hfdllc@outlook.com Service: Design, Hydraulic Calculation & Stocklisting of Water Based Fire Sprinkler Systems.

Harrington Group, Inc.

2400 Meadowbrook Pkwy #250 Duluth, GA 30096-4635 Phone: 770-564-3505 Website: www.hgi-fire.com Contact: Jim Tuten Email: jtuten@hgi-fire.com Products/Services: Harrington Group, Inc. is an engineering design and consulting firm with offices in metro Atlanta, Georgia and Charlotte, North Carolina. Our firm specializes in Fire Protection Engineering, Forensic Engineering and Property Loss Control Consulting. Established in 1986, the firm has grown to become one of the largest and most experienced practices headquartered in the southeast region dedicated to these fire protection engineering specialties. Design & Consulting:

Design and consulting services vary widely according to the client's need, from a relatively simple sprinkler design to a highly specialized AFFF foam/water deluge or FM-200 gaseous fire extinguishing system. Sophisticated code analysis or computer fire modeling is often provided to satisfy a client's need. The primary objective of design and consulting is to provide cost-effective, reliable defenses against the threat of fire for life, property and business operations.

Hawaii Fire Design & Solutions

94-1425 Kahuli Street Waipahu, HI 96797-4329 Phone: 808-226-9669 Contact: Daniel Schenbeck

Hawk Fire Design, Inc.

177 Jupiter Trail Weatherford, TX 76088 Phone: 817-594-4454 Contact: Mark Davis Email: hawkfirepro@gmail.com Services: Fire sprinkler system design services.

HCC & Associates, Inc.

PO Box 8085 West Grove, PA 19390-0885 Phone: 302-369-6901 Website: www.hccassoc.com Contact: Hal Cohen

Henderson Engineers, Inc.

8345 Lenexa Drive Suite 300 Lenexa, KS 66214-1777 Website: www.hei-eng.com/ Phone: 913-742-5539 Contact: Mike Phillips Email: mike.phillips@hendersonengineers.com

Honda North America

2400 Honda Parkway Marysville, OH 43040 Phone: 937-498-5000 Contact: Rick Paulus

Icon Fire Systems Design

92-324 Pueonani Pl. Kapolei, Hawaii 96707 Phone: 808-672-7214 FAX: 808-672-7214 Thomas Burtness, Owner

Interface Engineering

100 SW Main Street Ste 1600 Portland, Oregon 97204 Phone: 503-746-3732 Contact: Jared Hill Email: jaredh@interfaceengineering.com

Idaho National Laboratory PO Box 1625 Idaho Falls, ID 83415-0001 Phone: 208-526-3889 Contact: Cory Stolworthy

International Code Consultant

8207 Asmara Drive Austin, TX 78750-7857 Phone: 512-795-2900 Contact:: Jeffrey Schapiro, PE

Jason M. Scates, PE

1805 N. 2nd St., Suite 5274 Rogers, AR 72756-2423 Phone: 479-631-5274 Contact: Jason Scates

JEM Design Group, LLC

490 W. Rolling Meadows Suite C Fond Du Lac, WI 54937-8643 Phone: 920-238-9380 Contact: James Michels Email: jamesmichels@charter.net

Jensen Hughes

600 W. Fulton St. Suite 500 Chicago, IL 60661-1242 Phone: 312-879-7200 website: www.jensenhughes.com Contact: Jim Zimmerman

Jet Propulsion Laboratory

4800 Oak Grove Drive Pasadena, CA 91109-8001 Phone: 818-354-9873 Contact: Armen Minatsagha

Johnson Controls/TFPP

1467 Elmwood Avenue Cranston, RI 02910-3849 Phone: 845-235-7088 Contact Name: Kacee Paige Email: kaceelpaige@gmail.com

JS Consulting

717 Pine Court, Blanchard, OK 73010 Phone: 405-476-4737 Contact: Jairo Soto

JW Fire Sprinkler Design

5 Mezabish PI. Unit 201 Monroe, New York 10950 Phone: 845-234-4599 Contact: Joel Werzberger

K & E Fire Protection

14 Plaza 9 Manalapan, NJ 07726 Phone: 732-303-1717 Contact: Justin Kay Email: j.kay@kefire.com

Kelly P. Reynolds & Association

PO Box 5518 Goodyear, AZ 85338-0609 Phone: 800 950 2633 Contact: Kelly Reynolds

King Sprinkler Design

95 Wilson Ln. Tornado, WV 25202 Phone: 304-546-5443 Contact: Dwayne King, President

Koffel Associates, Inc.

8815 Centre Park Drive Suite 200 Columbia, MD 21045-2107 Phone:410-750-2246 Contact: Mark Aaby

Kohler Ronan Engineers

93 Lake Ave. Danbury, CT 06810 Phone: 203-778-1017 FAX: 203-778-1018 Contact: Kevin Czarmecki

Kossfire, LLC

184 Laura Drive Gahanna, OH 43230 Phone: 614-687-6062 Contact: Richard Kossler

Krim Associates

45 Eisenhower Drive Suite 550 Paramus, NJ 07652-1425 Phone: 201-632-2026 Contact: Jonathan Peters

Leo Daily

730 Second Avenue S Suite 1100 Minneapolis, MN 55402 Phone: 952-367-6910 Contact: Emily Gascho, Melisa Rodriguez, Nic Johnsen Email: eagascho@leoadaly.com, marodriguez@ leoadaly.com, nsjohnsen@leoadaly.com

Logan Township

125 Main Street Logan, NJ 08014-0314 Website: www.logan-twp.org Phone: 856-467-3424 Contact: Joseph Tull

Lund Fire Protection, Inc.

PO Box 459 Norwalk, Iowa 50211 Phone: 515-981-0912 Fax: 515-981-0913 Contact: Jonathan Lund

Lockheed Martin

7829 Windover Way Titusville, FL 32780-3706 Phone: 321-225-4113 Contact: Kerry Hammers

MT&A Fire Protection Consulting

1623 Hot Springs Hwy. Benton, AR 72019 Phone: 501-794-6950 Website: www.mtafire.com Contact: Kent Stewart

Malek & Associates Consultants, Inc.

3560 S. Iowa Ave. St. Francis, Wisconsin 53235 Phone: 414-483-0100 FAX: 414-483-1211 Contact: David Malek, President

Mechanical Designs, Ltd.

67 Chouteau Ave. Framingham, MA 01701 Phone: 508-653-5452 FAX: 508-655-1318 Contact: Maurice Pilette

MEP Associates, Inc.

2720 Arbor Court Ste A Eau Claire, Wisconsin 54701 Phone: 715-832-5680 Fax: 715-832-5668 Contact: Timothy Coach

Merck & Company, Inc.

PO Box 4 West Point, PA 19486 Phone: 215-652-6636 Contact: Jameson Wendell

Meridian Fire and Security, LLC

7173 S. Havana Street Suite 400 Centennial, CO 80112 Phone: 303-790-2520 Contact: George McNeill

MFP Design, LLC

3356 E Vallejo Court Gilbert, Arizona 85298 Phone: 480-505-9271 Fax: 480-430-6107 Contact: Travis Mack

MG Fire Design, Inc.

19511 Progress Drive, Suite 2 Strongsville, Ohio 44149 Phone: 440-878-9621 Fax: 440-878-3939 Contact: Mark G. Karr, President

Services:

Fire System design service. Commercial, industrial, residential, retrofit, and limited area. NICET Level IV and State of Ohio certified. BIM coordination experienced. Design exclusively with the AutoSPRINK software. Alternate to Cecil Bilbo, Jr. on the NFPA Technical Committee on Sprinkler System Installation Criteria (AUT-SSI).

Mile High Design Group, LLC

5151 Bannock St. Denver, Colorado 80216 Phone: 303-291-1012 Fax: 303-383-5023 Contact: Timothy N. Trostel, Jr., SET-President Services: Fire Sprinkler layout, design and consulting, all CAD design-3D design, NAVIS coordination, Hazen-Williams, Darcy-Weisbach formula calcs, stock listing, plan reviews.

MK Fire Protection & Supply, LLC

12749 Irelands Corner Drive Galena, Maryland 21635-1510 Phone: 856-816-5711 Contact: Barbara Baccile Email: barb.baccile@mkfireprotection.com

Motorist Mutual Insurance

509 9th Street De Witt, IA 52742-1333 Phone: 563-321-2832 Contact: William Doornbos

National Fire Control

2427 W. Lake Hazel Rd. Meridian, Idaho 83642 Phone: 208-284-5339 Fax: 866-807-5083 nationalfire@overarch.com Contact: Nick Anderson Services: Fire sprinkler design, NICET Level IV.

National Fire Protection LLC

12659 Marcum Court Fairfax, VA 22033 Phone: 517-263-4314 Contact: Sandra Iskander

Norfire Design, Inc.

23802 Gaberdine Road Saint Augusta, MN 56301 Phone: 320-492-3941 Word: Eduard Meijer Email: emeijer@norfire.com

Northeast Fire Systems

140 Union St. Vernon, Connecticut, 06066 Phone: 860-894-7447 Fax: 860-896-7448 Contact: William Cieslak

Northwest Sprinkler Designs

3950 Palisades Park Drive Billings, Montana 59102-0184 Phone: 406-534-6726 Fax: 406-534-6727 Contact: Bryan Kendrick

Northwest Sprinkler Designs, LLC

18207 E. 10th Äve. Spokane Valley, WA 99016 Phone: 509-924-0520 Fax: 509-924-5348 Contact: Rene Gordon

Neptune Fire Protection Engineering

60 Ocean Blvd. Ste 15 Atlantic Beach, Florida 32233 Phone: 904-652-4200 Fax: 904-212-0868 Contact: Stephen Kowkabany, Owner Services: Design of fire sprinkler systems, fire alarm systems, site fire protection, smoke control systems, passive fire protection systems, life safety and special hazard systems.

NFPA

1 Batterymarch Pk. Quincy, MA 02169 Phone: 617-984-7458 FAX: 617-984-7110 Contact: Christian Dubay, V.P. Codes & Standards

OLA Consulting Engineers

50 Broadway Suite 2 Hawthorne, New York 10532-1253 Phone: 914-919-3206 Contact: Christine DiSisto Email: cdisisto@olace.com

PAE Consulting Engineers

522 SW 5th Avenue Suite 1500 Portland, Oregon 97204-2116 Phone: 503-542-0541 Contact: Dan Somlea

Panacea Group

W746 County Road Vv Seymour, WI 54165 Phone: 262-343-1966 Contact: Eric Radke, Keith Plaster

Paragon Fire Sprinkler Design

12403 SE 25th Pl. Bellevue, WA 98005 Phone: 206-786-3645 Fax:425-898-7772 Contact: David Farahani, Owner

Peak Mechanical Solutions

191 Dupont Street Brooklyn, NY 11222 Phone: 718-383-8314 Contact: Nithin Ninan Mathew Email: nithin@peak-mech.com

Pehrson Fire

7455 France Avenue South #271 Edina, MN 55435-4702 Phone:612-590-5044 Contact: Rich Pehrson Email: pehrson@mninter.net

Peter Thomas Consulting Inc.

137 Finch Lane Saunderstown, RI 02874-2218 Phone: 401-601-6699 Contact: Peter Thomas Email: peterthomas.ptc@gmail.com

PGA Experts, Inc

101, Rue Marquerre Saint-Lambert-De-Lauzon Canada GOS2W) Phone: 418-889-9662 Contact: Gilles Carrier Email: g.carrier@videotron.ca Products/Services: Fire Protection Consultant (sprinkler system, fire pumps, standpipe, special hazard)

Philip R. Sherman, P.E.

PO Box 216 Elkins, New Hampshire 03233-0216 Phone: 603-526-6190 Contact: Philip R. Sherman P.E., Consulting Engineer Email: psherman@prsherman.com Services: Building code consulting and fire protection engineering.

Phiscon Enterprises, Inc.

213 S. Davis Ave. Audubon, New Jersey 08106 Phone: 856-310-9088 Fax: 856-310-0487 Contact: Philip Sconyo, P.E., President

Prime Inspection

3310 W Walnut St. Garland, TX 75042-7113 Phone: 214-738-5657 Contact: Sanjay Chandrahas

Princeton University/Office of Design & Construction

131 MacMillan Bldg. Princeton, New Jersey 08544 Phone: 609-258-6706 Fax: 609-258-2298 Contact: Robert Allen

Professional Fire Protection Design

92 Camp Meeting Road Bolton, CT 06043 Phone: 860-617-1515 Contact: Ronald Roark

Pyralis Sprinkler Design

PO Box 3029 Bozeman, MT 59772-3029 Phone: 406-577-8156 Contact: Eric Thomas

Quality Fire Design

661 E. Main St. #200-134 Midlothian, TX 76065 817-371-8962 Glenn Gillan, Owner wendyqfd@hotmail.com Phone: 817-371-8962 Contact: Glen Gillian, Owner

R.A. Kenz Company

275 Calvary Ln. Naples, ID 83847-5283 Phone: 208-267-9776 Contact: Robert Kenz, President

Ragoonan Fire Protection, Inc.

2231 NW 172 Terrace Miami Gardens, FL 33056 Phone: 786-285-4152 Contact: Afton Ragoonan

Ralph Gerdes Consultants

5510 S. East St. Ste. E Indianapolis, Indiana 46227 Phone: 317-787-3750 FAX: 317-787-3780 Contact: Ralph Gerdes, Owner

Renewable Power Engineering

28 Cleary Avenue Butler, NJ 07405-1223 Phone: 973-519-5111 Contact: Gerard OHalloran

Results4You, LLC

1777 West Main Street Suite 126 Sun Prairie, WI 53590 Email: www.results4youllc.com Phone: 608-512-9375 Contact: Ken Collins Email: result4you0@gmail.com

Rimrock Design Services-Middleburg

2518 Middle Road Middleburg, PA 17842-8698 Phone: 570-837-2639 Contact: Richard Mote

Ring & DuChateau

17400 W Capitol Drive Brookfield, WI 53045-2001 Phone: 414-778-7440 Contact: Joseph LaMonte

Risk Suppression Partners, LLC

2102 Kimberton Road Unit 966 Kimberton, PA 19442-1248 Phone: 484-924-8155 Contact: Wilton Marburger

Robert Cummings & Associates

181 Bow Dog Road Bow, NH 03304 Phone: 603-224-7453 Fax: 603-224-7467 Contact: Robert B. Cummings Email: bobcfpe@comcast.net

Robert Derector Associates

19 W. 44th St. New York, NY 10036 Phone: 212-930-5134 Contact: Michael Lonigro

Rochester Regional Health

1555 Long Pond Rd. Rochester, NY 14626-4122 Phone: 585-723-7002 Contact: William Timmons

Rocky Mountain Healthcare Services

310 South 14th Street Colorado Springs, CO 80904 Phone: 719-460-5918 Contact: Demetrius Winston

Rodkin Cardinale Consulting Engineers

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Rybak Engineering, Inc.

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Sevan Engineering

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Slicer & Associates

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Thomas Polise Consulting Engineer, P.C.

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Thunderbird Engineering, Inc.

1651 John Q Hammons Dr. Suite 101 Middleton, WI 53562-4714 Phone: 608-820-1201 Fax: 608-820-1204 Website: www.thunderbirdengineering.com Contact: James Mickowski, Principal Email: jimm@thunderbirdeng.com

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TK Engineering Company

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Tuazon Engineering

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Fire is fast. Fire sprinklers are faster.

Do Fire Sprinklers Really Save Lives and Property?

by Rachel Moreno

Harris County is the 3rd most populous county in the United States with over 4.7 million people. Harris County Seat is Houston, TX (which is the 4th largest US City). This article was submitted by Rachel Moreno, who serves as the Harris County Fire Marshal's Office Outreach Coordinator and Public Information Officer. Harris County Fire Marshal is Laurie Christensen. (See enclosed Photo – Texas Fire Sprinkler Coalition Chair Roland Garcia presents 2018 Texas Fire Sprinkler Saves Award to Harris County Fire Marshal and PIO Rachel Moreno.)

t the beginning of 2018, the Harris County Fire Marshal's Office began tracking the effectiveness of fire sprinklers, by documenting each time fire investigators responded to a fire scene in which a fire sprinkler system activated. By tracking fire sprinkler activations, HCFMO found fire sprinklers: saved \$144,266,225 in property, no fatalities or injuries were reported; and in 93 percent of the sprinkler activations, only one sprinkler head activated.

What do these statistics tell us about fire sprinklers?

• Fire Sprinklers Work

NFSN

• Multiple fire sprinkler heads activating at once is a myth.

Fire sprinklers work, there is no doubt about it, and the numbers prove it. In 27 fire incidents that were reported in 2018, the losses were just over \$11,000,000, with pre-incident value at over \$155,310,275. Without fire sprinklers, the damage done by fire would have been exponentially higher. The numbers also show no losses of life or injuries in any of these fire incidents. Those two statistics show the effectiveness of fire sprinklers, without a doubt.

13 of these fire sprinkler activations occurred in apartments, where there is a high density of people living. These sprinklers controlled the fire until the fire department arrived, allowing for the safe evacuation of the apartment building. What else did the fire sprinklers do? Fire sprinklers minimized the damage, and numerous families were not displaced due to fire. The cost of repairs and relocating one or two apartments is far less than losing an entire building and relocating 10 or more families. There is no price, no number, you can put on a human life. The safety and security fire sprinklers provide to residents are also priceless. We all know fires can happen anywhere, at any time. When a fire sprinkler is present, the likelihood of massive property damage and loss of life



Harris County Fire Marshal Laurie Christensen and Harris County Public Information Officer Rachel Moreno receive award for the most reported sprinkler saves in Texas by the Texas Fire Sprinkler Coalition.

is dramatically reduced.

Harris County fire sprinkler save numbers also show fire sprinklers operate individually, not collectively. This dispels the myth that when one fire sprinkler activates, they all activate. Hollywood and movie makers have perpetuated this myth in numerous movies, for more dramatic scenes. Truth be told, fire hoses used by firefighters put out more than ten times the water flow per minute than a fire sprinkler. What does this mean? Fire sprinklers produce less overall water damage than fire hoses.

From the time a fire is discovered, it can take a fire department between four to eight minutes to arrive. In this amount of time, tremendous smoke and fire damage can be done. Fire sprinklers react, responding only when temperatures near the sprinkler reaches 135-165 degrees Fahrenheit. The water released from the sprinkler is designed to last for at least ten minutes, which is enough time to extinguish the fire or keep it under control until the fire department arrives.

Fire sprinklers are a proven way to protect lives and property, as demonstrated by the \$144,266,225 in property that was saved in unincorporated Harris County during 2018. As we continue to track fire sprinkler saves, more information can be provided to show the effectiveness of fire sprinklers.•

Protecting Data Centers with Inert Gas and Acoustic Nozzles

by Derek Sandahl, Global Product Manager, Engineered Systems, Johnson Controls

ertain building environments require unique fire suppression solutions depending on the assets being protected. While a water sprinkler system is standard protection for the building structure and occupants, it is a good practice to also employ a clean-agent system with early warning detection as the first response in areas containing sensitive electronic equipment. Data centers in particular present a unique set of challenges due to the sensitivity of hard disc drives (HDDs). Among those challenges is susceptibility to damage caused by acoustics emitted from inert gas fire suppression systems. Fortunately, there are strategies to help lower acoustic levels to protect mission critical assets in data centers.

How Clean Agent Fire Suppression Works

Clean agent suppression systems consist of pressurized inert gas typically at 150, 200 or 300 bar and normally stored in 80-liter or 140-liter containers. Suppression is achieved through the reduction of oxygen to less than 15 percent by volume. Discharge time is typically between 60 and 120 seconds, with longer discharge times reducing the room free vent area required to prevent room over pressurization.

There are two types of inert gas systems:

- Constant flow technologies that lower output pressure at discharge to a constant pressure, such as 60 bar. This provides the benefit of lower grade piping and lower room venting requirements.
- Orifice flow technologies, which use a series of orifices to limit peak pressures and control overall discharge times.

Acoustic Issues with Data Centers

HDDs used to store valuable information in data centers have become increasingly vulnerable to sound as their technology and storage capacity have evolved. Contractors and engineers tasked with specifying suppression systems must ensure HDDs are protected from both fire damage and sound damage.

Upon activation during a fire event, inert gas systems release a clean gaseous agent from pressurized cylinders. The gas moves through the pipes at a very high velocity, and upon exit through the nozzle it generates a relatively high level of acoustic noise. When this noise reaches the HDDs it creates vibrations, which cause the

read/write element to go off the data track and compromise its performance. Independent testing shows that high sound pressure (acoustic) levels can result in a degradation in the performance of some HDDs for a short period of time. In some cases, the result is complete HDD failure.

Damage to hard disk drives can be extremely detrimental to companies. This was demonstrated recently after several large businesses suffered significant data and monetary loss caused by data center downtime. Therefore, it is critical that engineers and contractors understand the threat of sound pressure and implement a solution that reduces noise disturbance caused by fire suppression system discharge.

Measuring Sound Pressure

The sound output of fire suppression systems is dependent on several factors including agent discharge nozzle design, discharge duration, peak agent flow rate, and valve technology. When investigating noise control issues in data centers, companies should consider the Source-Path-Receiver (S-P-R) Paradigm, which provides insight into the measurements necessary to define and address acoustic issues in data centers.

Data center owners and operators using the S-P-R Paradigm can gain a better understanding of how sound is generated as *sound power* at a source and altered through the room's path to the resulting sound *pressure*.

Here is how S-P-R is defined:

- Source = The system that is generating noise.
- **Path** = The route that sound/energy takes to reach the receiver.
- Receiver = The person or object affected by noise.

Suppression nozzles have varying impacts on HDDs due to specific installation parameters and room parameters. Each data center has unique room sound parameters that change the sound as it travels from the source (suppression nozzle) to the receiver (HDDs), resulting in different levels of sound impact on the receiver (HDDs).

To correctly quantify the sound output of a source, a sound metric independent of the distance between the source and receiver

and independent of the path must be used to distinguish sound power level versus sound pressure level.

Researching Sound Pressure Levels

Johnson Controls and Michigan Tech conducted research into the impact of acoustics on HDDs in data centers. A sample of 12 enterprise model HDDs were selected to represent the population of HDDs commonly found in today's data centers. The 12 HDDs contained samples from five different brands with capacities ranging from 320 gigabytes to 10 terabytes.

HDD performance during acoustic testing was captured by monitoring the drive's read/write speeds. Each HDD was exposed to sound pressure levels ranging from 80 dB to 130 dB. Noise levels were increased in five dB increments until the drive's read-write speed performance was reduced by 50 percent from the baseline, which is the threshold of acceptable performance.

Testing indicated sounds pressure levels of approximately 110 dB were likely to cause reduced performance in HDDs. However, some drives within the test experienced reduced read/write speeds when exposed to sounds as low as 85 dB.

Designing an Acoustic Solution

To minimize the risk of equipment downtime, inert gas suppression systems should be installed in data centers with nozzles that reduce discharge noise levels to prevent vibrational harm to sensitive HDDs. By generating a sound power less than 110 dB, inert gas suppression nozzles effectively suppress fire while safeguarding sensitive HDDs from acoustic damage.

Acoustic nozzles are designed to emit low sound levels while allowing the clean agent to uniformly reduce the oxygen concentration throughout the data center. Sound absorbing materials within the nozzle are selected based on extensive research and physical testing.

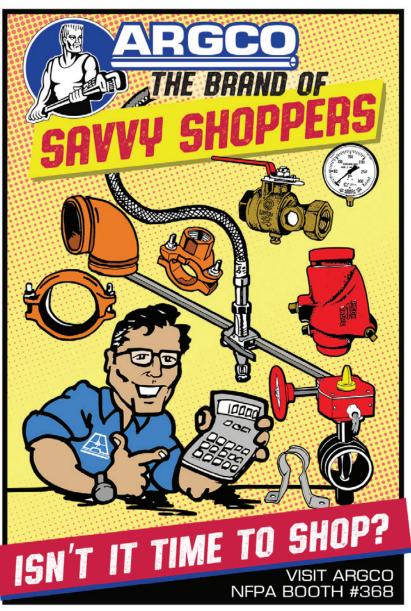
Investing in Data Security

Data centers should have acoustic calculations performed to ensure fire suppression system installation meets sound performance requirements to help reduce the risk of HDD degradation. There are tools to help data center managers get started. The ANSUL Acoustic Calculator generates acoustic calculations to estimate HDD sound pressure levels for suppression systems using an acoustic nozzle.

Results determined by acoustic calculations can help facility personnel select the appropriate suppression system nozzle, the ideal nozzle locations, and the optimal placement of the HDD within the data center.

Contractors and engineers should look for an acoustic nozzle with reliable equipment that can be used in both new construction and retrofits with suppliers that have products available to meet installation deadlines. Some acoustic nozzles can easily replace standard nozzles without major pipe rework or hydraulic adjustments, which can reduce sound exposure for HDDs by requiring fewer nozzles and piping.

Acoustic nozzle compliance should include UL verification for acoustic performance, UL listing for fire protection and compliance with NFPA 2001. Johnson Controls recommends data centers specify sound pressure levels of 110 dB or below across 500Hz to 10KHz frequency bands at HDD locations. The ANSUL® Acoustic Nozzle is the only UL Performance Verified nozzle designed to mitigate HDD downtime by reducing noise disturbance caused by fire suppression system discharge.•



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The Value and Consequences of 'Disruptive Innovation'

by Dave Molnar, VDC Special Projects Manager, Victaulic

he expression "disruptive innovation" is relatively new, but the phenomenon of new concepts radically impacting traditional ways of working is not. Harvard business school professor Clayton Christensen, who coined the expression, defines disruptive innovation as a product or solution that creates new markets and value networks, displacing established market leaders and alliances.

The industrial revolution was a point in history when disruptive innovation made a dramatic impact. The introduction of the steam engine and machines that enabled mass production completely changed the status quo. A more current example of a disruptive innovation is the Internet, which has utterly transformed the way people conduct business, access and share information and form social connections.

Building and construction today is experiencing a seismic shift that could be as dramatic to current-day operations as the industrial revolution was in the 18th and 19th centuries. Technologies like virtual reality (VR), 3D printing, and drones are transforming the way work is executed. In the fire protection industry, these innovative technologies are changing the way contractors, engineers and authorities having jurisdiction (AHJs) work, improving the way projects are designed and built and how the resulting systems are monitored, inspected and maintained.

VR Changes the Playing Field

NES

VR, which has reinvented the gaming experience, is having a comparable impact on the construction industry. Much of the same hardware – for example, HTV Vive and Oculus Rift headsets – that allows gamers to immerse themselves in the experience of a game are being used by fire protection professionals to improve system design.

VR has the ability to take Building Information Modeling (BIM) processes to the next level, enhancing communication, collaboration and coordination among project owners and facilities management staff. Traditional BIM workflows operate from a single 3D model that teams use to visualize where clashes and other issues can occur during the pre-construction process.

VR technologies are bringing computer models to life, allowing contractors and engineers to "walk through" a 3D environment to "see" a building during preconstruction to visualize how piping can be positioned, where interference is likely, and where functionality might be constrained. The information gathered through this experience enhances collaboration and ultimately improves fire suppression system design and placement.

Models can be pulled directly out of 3D modeling software like Autodesk Revit and placed into a virtual environment. Using the Cloud, team members can access projects from any location and on any device so all the right people can be "in the room" to identify issues as they arise and find ways to resolve them. By accessing information in a shared environment, teams can make changes in real time, allowing the trades to quickly locate areas that require modifications. Identifying potential problems early limits the amount of rework that has to be done later in the preconstruction process.

3D Printing Enables Faster Prototyping

3D printing is also known as additive layer manufacturing (ALM). ALM is a process of building up parts using successive layers of material under computer control. As the technology becomes more well understood, the types of material used is becoming more diverse, and the complexity of components being produced is expanding.

While large-scale 3D printers are creating parts to be used on large construction projects, manufacturers are using smaller 3D printing earlier in the design process to help decrease the time between design concept and prototype manufacturing. Having prototypes available in less time enables testing to begin more quickly, allowing modifications and feedback to be incorporated and eventually bringing products to market in less time.

By enabling manufacturers to print prototypes in real time, 3D printers allow end users to touch, feel, and see designs firsthand. Potential users can see how big a product is and how it fits. They can apply hardware and can even see how tools interact with the piece. Feedback can be incorporated immediately into the design, avoiding costly upgrades or re-runs to fix issues. Already, 3D printing is being used to create preproduction molds, allowing manufacturers to validate mold designs faster than ever before.

Drones Elevate Safety

Meanwhile, drones, which have transported viewers visually to continued on page 84

some of the world's most beautiful and inaccessible places, are making inroads in the construction industry. Their size, weight, and utility are changing the way workers can access sites and even how engineers or AHJs would inspect and document site activities.

With drones, it is no longer necessary to rely on another person to report visual observations or relay feedback verbally from the site. Drones can capture critical information firsthand and communicate it via streaming video feed to a remote team. By revolutionizing real-time data delivery, drones have changed the way the construction industry operates.

Perhaps one of the most important areas where drones are making a difference is in job site safety, which is a critical industry concern. Drones can be used for observation in areas that are difficult or dangerous to get to, allowing vital documentation to be gathered for engineers and authorities without compromising worker safety.

In fire safety systems where grooved couplings are used, a drone camera operator can easily verify couplings were properly installed in accordance with manufacturer's requirements, and for systems that employ flexible fittings or flexible sprinklers, drones can be used to inspect such things as bend radii.

As drone technology advances and more drones are used, the industry could witness a large step change

in job site inspectability. In time, drones might even make remote inspections a reality. The 2020 edition

of NFPA 25 will likely include expanded provisions for remote inspections and testing.

The Road Ahead

New technologies are enhancing the way contractors, engineers and AHJs manage jobs from planning to completion, making projects safer, expediting project schedules, and enabling efficiencies that reduce costs. Over time, VR, 3D printing, and drones will be adopted even more broadly by the fire protection industry, and their applications will be further refined.

Before long, these disruptive technologies will be as commonplace and indispensable to the construction industry as the Internet is to us today.•

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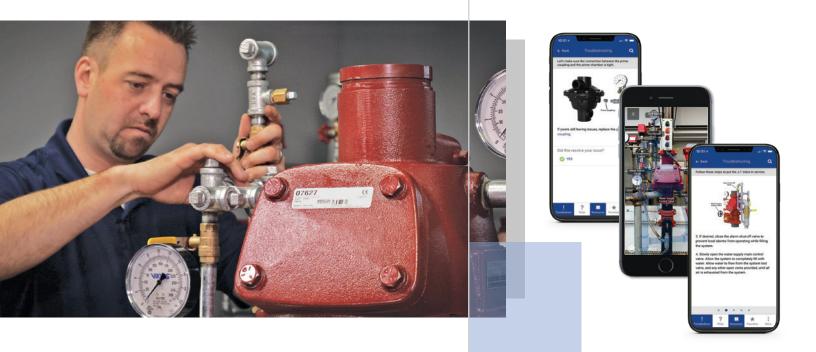


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Home Fire Sprinkler Incentives: Bridging the Knowledge Gap Between AHJs and Developers

by Peg Paul

FEATURE

rade ups are locally negotiated incentives that Authorities Having Jurisdiction (AHJ) can offer to builders or developers in exchange for improving life safety by installing fire sprinklers. A typical single-family development has around 50 homes, so it's easy to see the life safety promise in this approach.

Unfortunately, developer incentives are not as common as they should be. In a national survey of homebuilders conducted by HanleyWood (Builder Magazine) for the nonprofit Home Fire Sprinkler Coalition (HFSC), fifty-five percent of developers said they would be interested in building homes with fire sprinklers if they were offered incentives; yet only 6 percent had ever been offered them. The survey also found that only 9 percent of developers are aware that fire sprinkler incentives are available to them.

A companion fire service survey conducted by FireHouse found that less than half of U.S. fire department personnel know about the incentives. Ninety-five percent of fire department personnel say they support home fire sprinklers as a method to increase protection of new houses. Their strong support for sprinklers notwithstanding, 92% of respondents work in jurisdictions that do not currently offer any incentives to encourage homebuilders or developers to install fire sprinklers when they build.

The low percentage of AHJs offering incentives may be attributed to confusion about fire sprinkler requirements. The survey showed that 55% of the fire service said they were not aware that jurisdictions without home fire sprinkler requirements could offer incentives to builders and developers.

Another factor may be the role AHJs play during the planning process. According to the survey, only 41 percent of fire departments participate in planning/zoning board meetings. And when they do, that participation may come too late. Typically, sprinklered development based on incentives is the result of educational meetings during the pre-application phase, so that all stakeholders could review the land and discuss the incentives and options.

What are Incentives?

Common incentives include:

- Street-Width Reduction: Traffic lanes may be narrowed, substantially reducing the amount of pavement in every linear foot of street in the development.
- Longer Dead-End Streets: Dead-end streets may be increased in length, allowing additional house lots to be built.

• Tee Turnarounds Permitted: The permitted use of tee turnarounds in sprinklered developments can create at least one additional lot per cul-de-sac.

NESM

- Increased Street Grades and Building Setbacks: Steeper street grades and building locations are allowed further from where the homes' access leaves the main road.
- Additional Units Permitted: Development plans allow homes to be closer together.
- Expansion of Existing Water Supply May Not Be Needed: Required fire flows for fully sprinklered developments can be greatly reduced compared to non-sprinklered developments.
- Increased Hydrant Spacing: Supply mains may be reduced and hydrant spacing can be increased.
- Subdivision Single Access Point: A fully sprinklered subdivision allows for a single public access road. This decreases infrastructure costs and significantly increases the number of single family dwellings allowed.
- Gated Communities: Gated communities delay fire department access. A fully sprinklered subdivision provides mitigation for this impact, allowing developers to utilize this security option when desired.
- Reduced Basement Windows: Fire sprinklers reduce the number of required rescue openings in every basement sleeping room.

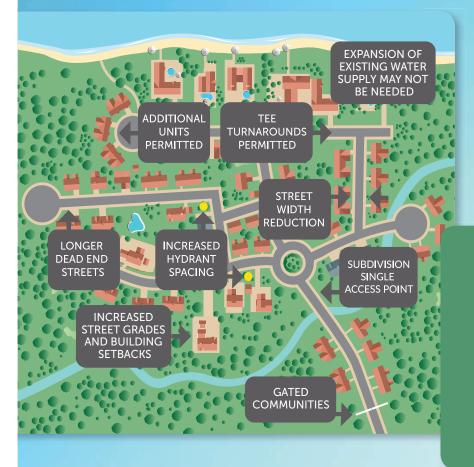
In response to the currently limited use of home fire sprinkler incentives, HFSC was awarded a FEMA Fire Prevention & Safety grant last year to develop new free educational resources AHJs and other members of the fire service can use to educate all stakeholders involved in the local planning process. These resources include case studies with videos, downloadable presentations, statistics and economic data gleaned from several communities. The information reflects the experience of large and small developments.

HFSC's sprinkler incentive program partners the fire service with builders or developers and has great potential to deploy a local plan that will help protect communities for decades. The key to success in any jurisdiction is early participation by fire officials in the planning process to encourage more developers to take advantage of incentives, resulting in more sprinklered developments.

For more information visit: HomeFireSprinkler.org/crr •

These Incentives Improve Community Safety and Provide Developer Savings

In exchange for installing home fire sprinklers in entire developments, authorities having jurisdiction can offer locally negotiated trade-ups as incentives to developers. These incentives may include:







For more information about home fire sprinker incentives, including case studies, video testimonials, fact sheets and NFPA 13D information, visit our website at **HomeFireSprinkler.org/crr**.

- Street-Width Reduction
- Longer Dead-End Streets
- Tee Turnarounds Permitted
- Increased Street Grades and Building Setbacks
- Additional Units Permitted
- Expansion of Existing Water Supply May Not Be Needed
- Increased Hydrant Spacing
- Subdivision Single Access Point
- Gated Communities

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* Environmental Impact of Automatic Fire Sprinklers, FM Global, 2010

Home Fire Sprinklers: A Win-Win for Your Entire Community

Home fire sprinkler incentives can reduce construction costs, while protecting residents and firefighters, and help to protect the environment.

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Did you see us on Fox & Friends?



If you would like to make a donation to Common Voices during this holiday season, we would again like to say, thank you from the bottom of our hearts.

As advocates for fire safety, we could not continue our work without support from great people like you.

DONATE TODAY

MEMBERSHIP

Common Voices: An Advocate's Coalition Determined to Create a Fire Safe America

Individual memberships are set forth in the by-laws as described below:

FRIEND (FREE)

Free to everyone who signs up at www.fireadvocates.org (includes electronic access to *Common Voices News* on quarterly basis).

ADVOCATE (4 LEVELS)

For those affected by fire who wish to support the purpose of Common Voices:

•	Platinum	\$1,000+
•	Diamond	\$500

- Gold\$250
- Silver \$100

SUPPORTER (4 LEVELS)

For individuals who wish to support the purpose of Common Voices:

•	Platinum	\$1,000+
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- Silver\$100

CORPORATE (4 LEVELS)

For associations, corporations, agencies, etc. that are interested in supporting the purpose of Common Voices:

•	Platinum	\$25,	000+
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- Diamond \$5,000
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Please mail completed form (and check) to:

Common Voices P.O. Box 162 Pleasant View, TN 37146

ANNUAL DONATION FORM

MEMBER INFORMATION

First Name
Middle Name
Last Name
Title
Title 2 (if applicable)
Professional Designation (Dr., EFO, CFO, etc.)
Organization Name (if applicable)
Email Address
Street Address
City
State/Province/Region
Zip/Postal Code
Country
Telephone Number

ANNUAL DONATION LEVEL

FRIEND – This FREE level of membership support is available to everyone who signs up and includes electronic access to *Common Voices News* on quarterly basis.

ADVOCATE – This level of membership support intended for those affected by fire. (Burn survivor or family member of someone lost to fire)

Platinum (\$1,000+)	\Box Diamond (\$500)	□ Gold (\$250)	□ Silver (\$100)
OTHER – Amount \$_			

SUPPORTER - This level of membership support intended for individuals who wish to support advocates and their mission.

□ Platinum (\$1,000+) □ Diamond (\$500) □ Gold (\$250) □ Silver (\$100) □ OTHER - Amount \$_____

CORPORATE - This level of membership support intended for companies and organizations who wish to support the advocates and their mission.

□ Platinum (\$25,000+) □ Diamond (\$5,000) □ Gold (\$2,500) □ Silver (\$1,000) □ OTHER – Amount \$

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□ Check	Credit Card 🛛 🔽 🗖 🚭
Payable to:	Name on Card
Common Voices	Credit Card Number
	Expiration Date (mm/yy)
	CW Code (3 digit code on back)

ADDITIONAL COMMENTS/INFORMATION

Thank you for your support! Your continued support will help us expand our efforts to create a Fire Safe America, turning tragedy into advocacy. You are appreciated, we are glad to have you on our team! LOOK UP for safety... your life and the lives of your family could depend on it.

Saluting the Fire Chief

Chief West started as a volunteer firefighter in 1976 and became a career firefighter in 1984. He has been a member or employed by six fire departments for the past 42 years. Chief West has worked in every city in Tennessee as a fire management consultant and served as the TN State Fire Marshal for 7+ years.

When asked about his decision to install fire sprinklers in his home, here's his response. We appreciate and salute Chief Gary West, from Ashland City, Tennessee.

I installed fire sprinklers in my home because I truly believe in today's world, it's the only way to make it out alive in the event of a fire. I believe you need to walk the walk and talk the talk. I feel better when I'm away and my family is home but also feel safe what I'm home myself. They are one of the simplest life-saving systems you can have but as technological as your home security system, camera monitors, motion detectors, smoke and carbon monoxide alarms, or even thermostat. Fire sprinklers have been around much longer than any of those things. I wanted to be a state fire marshal that could say that my home had fire sprinklers. I wanted to be able to tell legislators and home builders that they work so well that I have one myself.

I know today, with my experience in fire protection, fire sprinklers save lives and property, they save firefighter lives, jobs,

LERS

Gary West Former Fire Chief & State Fire Marshal Now, NFSA Director of Field Operations

Fire sprinkler incentives are included in tax reform – visit nfsa.org for the latest info the tax base, lower insurance risk and cost, and provide a satisfaction of being safe in a world of heavy fuel loads. I could go on and on with my beliefs on good fire protection, but every topic would include fire sprinklers. Feeling safe where you live, work, or visit always includes fire sprinklers.

Leading by Example ... #fastestwater in the house

We are proud to partner with the National Fallen Firefighters Foundation, and encourage all fire departments to embrace the 16 Firefighter Life Safety Initiatives. Pay special attention to Initiative #15: "Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers." For more information on the NFFF, visit firehero.org and join with us!

www.nfsa.org #fastestwater

The National Fire Sprinkler Association is proud to partner with our nation's fire service. We continue to extend our special offer to the fire service – 6 months FREE membership (Subscriber membership category). We believe that partnerships that understand how we can help each other helps us make our communities safer and keep firefighters and citizens safe, too! We want you to have the latest resources. Sign up today at nfsa.org.

Look for the Firehouse Ad icon in the bottom left hand corner on the home page.



Director of Outreach & Government Relations Vickie Pritchett pritchett@nfsa.org 615-533-0305 @vickiep4

SOCIAL SCENE



How NFSA's Social Networks Continue to Thrive After Ten Years

Since its inception, NFSA's social media presence continues to grow at a healthy pace. How do we keep our followers engaged after ten years on the social scene? Let me start from the beginning. When I first brought up starting a social network profile for NFSA, I was told everything

from *"Why bother preaching to the choir?"* to *"Don't put all your eggs in one basket."* T'm glad I'm not easily discouraged, and just a little bit hardheaded, because I didn't listen. I read, I followed, I learned, and I launched what some would consider a pretty darn successful social media network. Our Facebook, Twitter and LinkedIn sites are robust, lively and engaging. We add new followers every day! Now a little about how I do what I do.

Set Goals

What do you want to accomplish? What do you want your story to be? Who do you want to follow you? What do you want your social network to say about you? You should have an idea of exactly what you want, always set precise targets to know which direction you're moving in. Your target could be to increase brand awareness, grow followers, boost engagement, or generate business.

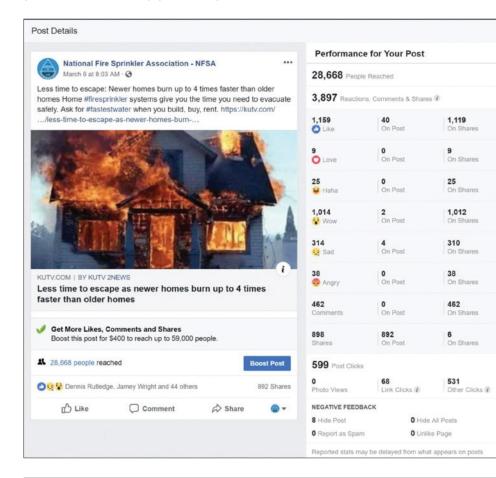
Know Your Audience

While our audiences on Twitter, Facebook and LinkedIn are equally enthusiastic, each are a bit different and respond to different postings in different ways. Twitter users love a good sprinkler save and posts with photos. The difference in shares between a post with a photo and one without is remarkable. Our Facebook followers love video! Post a side-by-side demo, or a video of a fire in an unsprinklered home and you've got Facebook gold. The number of followers that share these posts is markedly higher than posts without video. LinkedIn followers love a good controversy. Is there a jurisdiction that is challenging an existing sprinkler ordinance? Our LinkedIn followers are quick to share and comment on any post that contains the slightest bit of controversy. LinkedIn users love to engage on posts that pique their interests or need a statement of support.

Engage on Other Accounts' Posts

If you want to grow your audience, grow the accounts that you follow. Nine times out of ten, if I follow an account on any of the three social media platforms we use, they will follow us back. Like

continued on page 92



The numbers speak for themselves. The arresting photo and well thought out text were major contributors to the success of this post. As of this writing, it is still being viewed and shared by people all over Facebook. When you come across something similar, seize the opportunity to spread your message and increase public awareness. It works and it's free!



what they post, comment when you can, share their posts and let them know that you are out there, and you are listening. In return, they will listen and engage with you.

Link Your Social Media Accounts to Your Website

Make sure your social media accounts have your website displayed in a prominent place on your page. When posting, include your website in your post whenever you can. It does make a difference and those who are viewing one of your posts for the first time will be able to click on your website address to learn more about who you are and what your mission is.

Use Hashtags

Social media loves a good hashtag. A stellar example is #fastestwater. I use this hashtag whenever space allows, again and again and again. In the past year or so, it has been picked up by our followers and reused whenever they post a story about fire sprinklers. On Twitter alone, #fastestwater has reached 69,437 accounts and made 188,555 impressions. Whenever posting about fire sprinklers, it is posted as #firesprinklers. That hashtag has reached 32,725 accounts and made 83,546 impressions. There's a great free service called tweetreach.com. You can input your hashtag and you'll see your accounts reached, impressions made and even other accounts that have used your hashtag. Give it a try! You can check my figures if you like.

Don't Be Afraid to Step Out of the Box

Once in a while, everyone enjoys a good laugh. When we come across a great joke or funny photo from one of our followers, we're not afraid to share it. We make people smile, we get lots of shares and our name gets out there. Check online to see if it's a crazy holiday and post about it! If you look at your Twitter homepage, you will see trending hashtags on the right side of the page. Use them! If it's #NationalCupcakeDay, don't be afraid to use the hashtag and post a photo of your favorite cupcake with a link to the recipe.

To stay relevant, you have to stay fresh! We've come a long way from "preaching to the choir." Our followers run the gamut from engineers, to housewives, from politicians to preachers. We've got them all, and every one of them matters. Every one of them is a potential voice that will further our mission and spread the word to others of #whywedowhatwedo (one of my favorites).•

If I can be of any help to any member wanting to get started, or improve their existing social media accounts, I'm happy to help. Contact me at genadio@nfsa.org.

Seeking Submissions for Upcoming NFSM Issues:

Jul/Aug Sprinkler System Retrofit

Sept/Oct Member Takeover-author's choice

Nov/Dec Retrospective: 123 years of Fire Sprinkler Standards

Check the back of this issue (page 71) for submission guidelines. Questions and queries should be directed to NFSM Editor Joanne Genadio at genadio@nfsa.org



CONFERENCE & EXPO JUNE 17-20, 2019 SAN ANTONIO, TX

WHAT WE DO IN SAN ANTONIO CAN HELP NEW HOME OWNERS SLEEP SAFER.

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IT'S A BIG WORLD. LET'S PROTECT IT TOGETHER.

CHAPTERS in ACTION

Northwest Chapter News

Both the Puget Sound and Columbia-Willamette chapters hosted Troy Wiltbank of Johnson Controls at our February meetings. Ironically, the Seattle area chapter was in the midst of a snow event, so the presentation on antifreeze systems was very timely. Mr. Wiltbank covered the criteria used by UL to certify antifreeze for water-based fire protection systems and discussed frequently asked questions about Tyco's LFO Antifreeze.

Gregg Vlahakis, Business Development for the Viking Corporation, is the guest speaker at the April 9th Puget Sound NFSA Chapter meeting and the April 10th Columbia-Willamette NFSA Chapter meeting.

NFSA PenJerDel Chapter and AFSA Schuylkill Chapter Hold Joint Meeting

Both the NFSA and AFSA held a joint meeting last month to discuss industry updates in Pennsylvania over the past year. Among the topics covered were the past and upcoming burn trailer seasons, as well as the NFSA's and AFSA's recent efforts in Harrisburg concerning licensing and certification for fire sprinkler installation.

The associations celebrated advancements made in the industry in the past year and looked forward to more progress in 2019!

NFSA North Texas has set the dates for four Chapter Meetings in 2019



February 12, 2019 — Antifreeze Updates by JCI Dynamic Duo Greg Gordon and David Nungaray

April 24, 2019 — Viking Group Inc.

August 7, 2019 — TBD

November 21, 2019 — TBD

Three of the North TX Chapter Meetings will be joint meetings with the FSCATX (*Fire Sprinkler Contractors Association of Texas*), FPANT (*Fire Prevention Association of North Texas*), and SFPE DFW.

NFSA and FSCATX believe that those topics that benefit all Fire Sprinkler Contractors should be held jointly to maximize resources and to save time for the entire fire protection industry.

NFSA Wisconsin Display at Metropolitan Builders Association's Home Show

The NFSA Wisconsin Chapter continued to provide sponsorship to the Wisconsin Fire Sprinkler Coalition for a second year to pay for a booth and materials at the Milwaukee Metropolitan Builders Association's Annual Home Show at Wisconsin State Fair Park in West Allis. This year's show was January 11 -13, 2019. The Chapter was once again part of the Step Beyond Green to Healthy feature area in the middle of the show. This year's event was promoted in the Milwaukee Journal Sentinel with pictures provided by the Metropolitan Builders Association featuring NFSA WI State Coordinator Marty King and showing the residential fire sprinkler system. Over 1,000 people walked through the exhibit with many stopping to discuss home fire safety and fire sprinklers

FFSA Legislative Watch

Florida Fire Sprinkler Association has updated their website with Legislative Watch, a list of legislative bills affecting our industry.

FFSA's lobbyist, Meenan Law Firm, provides an updated list of legislation we should be aware of. The bill tracking report is published every Monday.



Visit our website at www.floridafiresprinkler.com click on Legislative Watch to download the PDF. Don't miss the opportunity to stay up-to-date on legislative issues. Please feel free to share the information with your team. We can't make a difference if we don't stay informed.

Illinois Chapter Elections

The NFSA Illinois Chapter held board elections at the January 10, 2019 Chapter meeting. Elected to the Board positions are as follows:

Chapter Chairman Vice Chairman Chapter Secretary

Chapter Treasurer

Edward Kadlec Jr., C.L. Doucette, Inc Alan Jacobs, Shambaugh & Son David Rosso, Reliable Automatic Sprinkler Co, Inc. Matt Clegg, Valley Fire Protection Systems, LLC



New to the Board is Matt Clegg, elected to the Treasurer position

MEMBERS in ACTION

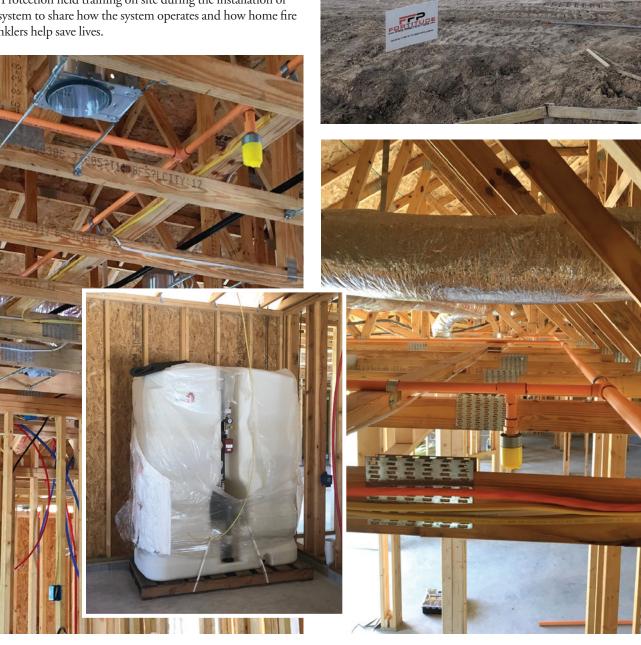
First New Home in Columbia County, Florida Gets a Fire Sprinkler System

NFSA member **Fortitude Fire Protection, LLC** was the installing contractor for a fire sprinkler system in the very first new home in Columbia County Florida. With this being new to

some folks, Troy Bohrer, owner of Fortitude Fire Protection was asked by the general contractor, local county fire



department and local fire officials to help them learn more about single-family dwelling fire sprinkler systems. Fortitude Fire Protection held training on site during the installation of the system to share how the system operates and how home fire sprinklers help save lives.



NFSA Member Plays Major Role in Washington State Tunnel Project

MEMBERS in ACTION

By **Suzanne Mayr** Northwest Regional Manager

s dignitaries and the public gathered to celebrate the opening of the long-awaited Washington State Route 99 tunnel in early February, NFSA member Reliance Fire Protection joined the community in a collective sigh of relief. As designers and installers of the fire protection system in the SR99 tunnel, they know their work will be largely unseen by the public, but that it plays an important role in safeguarding occupants of the estimated 7,000 vehicles per hour expected to travel through the tunnel.

Most commuters driving the new route under the city of Seattle are simply relieved to have a new option to bypass congested city streets from the stadium district to the Space Needle. The tunnel project had been more than a dozen years in the making in a city known not only for historical industrial ingenuity, but more recently for paralyzing gridlock in both traffic and politics. The tunnel replaced an aging viaduct running alongside the city's waterfront—a heavily-traveled stacked highway that eerily resembled the ill-fated Oakland viaduct that collapsed in a 1989 earthquake.

The new Seattle tunnel routes traffic under the city in a two-level structure that boasts state-of-the-art fire suppression, ventilation, seismic, lighting and communications systems. With its history

Fire sprinkler retrofit pays off in Colorado tunnel

When the Eisenhower/Johnson Memorial Tunnel opened in 1979, it became the highest vehicle tunnel in the world with an average elevation of 11,112 feet. With separate bores for east- and west-bound traffic, the twin tunnels provided a route under the continental divide along Colorado's I-70. As roughly 30,000 vehicles pass through the tunnels each day, the potential for a devasting fire is high. Four years ago, the tunnels were retrofitted with a specially-engineered deluge fire protection system, featuring a custom boiler that continually circulates was the main fire protection contractor on this ground-breaking system.

The first real-world test of this system occurred Jan. 28, when a car burst into flames on January 28, 2019. The system "worked as intended" in controlling the fire. The tunnel was back in operation within hours, with no damage to the structure.

of working on other major public works projects in the area, Reliance Fire Protection was selected and began work in 2012. One challenge was working within the massive project's ever-changing timeline. When the world's largest boring machine, Big Bertha, broke down just five months into the digging phase, work stalled for two years as both engineers and lawyers scurried to repair the damage.

Timeline aside, the project's complicated logistics presented the biggest challenge, according to Project Manager Gary Barber. "It





was like working on a two-mile long high-rise. There was only one way in and out."

The Reliance crew followed the tunnel's massive boring machine and construction of the super-structure, requiring constant coordination. Getting materials and manpower down to where it was needed from the tunnel opening meant covering a lot of miles. Project Superintended Wally Cinkovich wore a pedometer, reportedly logging in 7-9 miles per day.

Reliance is no stranger to the unique tunnel logistics as its portfolio includes the 11,400 foot twin University Link Light Rail U220 Tunnel (totally 22,800 feet of fire protection), and the 3,800 twin U230 ULink Tunnel (totaling 7,600 feet of fire protection), and the Seattle Bus Tunnel.

The fire suppression system in the SR 99 project drew a lot of interest in local media as the tunnel neared completion and testing of the deluge systems created camera-friendly footage. A Washington Department of Transportation video of the testing posted on YouTube has been viewed more than 9,000 times.

With more than 24 miles of piping, the 208 deluge systems are capable of emitting approximately 6,400 gallons of water in two minutes if two systems activate simultaneously. The roadway was specifically engineered to ensure it was strong enough to handle the weight of the water during an incident, and 3.8 miles of drainage pipes shuttle the water to a sewage treatment facility. A massive ventilation system can quickly clear the tunnel of smoke. With 8.3 miles of heat sensors and more than 300 cameras providing real-time data to a 24-hour manned monitoring station, any hint of a fire will be quickly detected.

With a goal of educating the public about the tunnel's safety features, grand opening events included a focus on STEM (Science, Technology, Engineering and Math) activities. By partnering with the Fire Sprinkler Advisory Board and NFSA, Reliance shaped its booth at the opening into an opportunity to educate the public about the value of fire protection not only in this highly visible project, but in all types of occupancies and construction across Puget Sound.

A banner highlighted some of the more interesting places to find sprinklers supplied and installed by local NFSA members in the Northwest, such as Century Link Field, the Space Needle, the Museum of Flight's space shuttle exhibit, the many Puget Sound Piers, floating bridges as well as ocean-going vessels such as NOAA. Another banner entitled "Fake News About Fire Sprinkler Systems" helped dispel common myths about fire sprinklers.

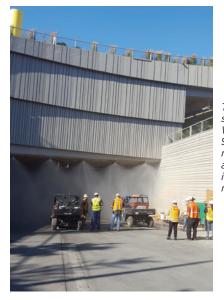
Visitors to the fire protection booth were able to handle samples of some of the tunnel's sprinkler components, watch a video of the testing of the deluge system, and learn how the sprinklers work with the tunnel's smoke detection, ventilation, evacuation and monitoring systems.

Adding a Superhero vibe that appeals to young and old, the industry's own mascot Sprinklerman acted as ambassador to the tens of thousands of event attendees, entertaining those waiting in the long line to walk the tunnel.

When the tunnel opened to vehicles on Feb. 3, the expected traffic surge was moderated by a particularly large (for Seattle)

snowstorm. The 68-degree snow-free tunnel provided a respite for the drivers willing to brave the area's under-plowed and often steep frozen roadways. And with its state-of-the-art fire protection system at the ready, the tunnel should provide a safe place year-round for the ever-increasing Seattle traffic.•

> Project Superintendent Wally Cinkovich of Reliance Fire Protection monitors a series of tests for the fire protection system in the newlycompleted Washington SR 99 Tunnel.



Testing of the deluge system in the new Washington State SR 99 Tunnel took two months to complete, and drew a lot of interest from the media and the public.

Sprinklerman joined the Fire Sprinkler Advisory Board of Puget Sound and the Reliance Fire Protection team. Shown are Sprinklerman (Megan O'Brien), Reliance's Nancy Hammond, Owner; Wally Cinkovich, Project Superintendent; Ramona Landreth, Office Manager, and Erykah Landreth, volunteer.





in memoriam JOHN VINIELLO

The National Fire Sprinkler Association (NFSA) is saddened to announce the passing of its former President, John Viniello on Tuesday, February 26, 2019. John served the Association as President from 1984-2012, and was involved in the fire sprinkler industry since 1973.

"John's contribution to the growth of the fire sprinkler industry is visible today in the number of personnel and the number of programs dedicated to advancing the mission of saving lives and property from fire through the widespread acceptance of the fire sprinkler concept, "stated NFSA President Shane Ray. "We extend our sympathies to John's family and everyone who knew him. His legacy in fire prevention and safety will continue to have impact for years to come."

John received the NFSA's Golden Sprinkler Award in 2005 and was inducted into the Hall of Fame in 2013. He became a part of the fire sprinkler industry in 1973 and served in several positions for NFSA from Assistant Director of Codes and Standards, Regional Manager for the Northeast, to Vice President of Field Operations, until he became President in 1984. He was involved in the formation of the International Fire Sprinkler Association in 1999.



Remembering John by Barry Waterman

We "came in" together in 1984 (35 years ago.) I was a newly elected director who had never been involved in any kind of national or association matter. John was elected the new president at my very first board meeting. The industry was hurting from a terrible economy and the recent formation of AFSA, when non-union contractors split away. The board was split between people who wanted new leadership and people who did not see the need for change.

Luckily for everyone, those who wanted change prevailed. I didn't even get to vote, because at that time new directors were seated at the very end of the meeting. They even tried to exclude me from the meeting. It wasn't the most fun I ever had – having so much focus on the new kid from Chicago. Mike Friedman – one of my heroes – got up and said something like "Shut up you old fogies. This board is crying for some new blood, and you want him to sit out in the hall?"

Anyhow, I survived with a few bruises. John began to rebuild things the first day. I was lucky enough to be involved and got to watch him work. There is no way to measure how much John helped the industry.

In 1984, manufacturers reported domestic sprinkler shipments of 14 million. 25 years later, in 2009, shipments were 46 million. If a trade association's job is to move its product forward, John and his NFSA team increased the market for people like me and my brother by a fantastic amount.•

JG Innovations, Inc. Announces New Website Design and Features

JG Innovations, Inc. is proud to announce the launch of their newly redesigned website, www.JGIUS.com, showcasing the Soffi-Steel[®], Interlock[™] and AlumA-Fit[™] Concealment Systems.

Some of the new features of the JG Innovations site include a 1-minute interactive animated video that quickly shows the installation process of the Soffi-Steel[®] Concealment System, its hardware and accessories. This new video shows the simplicity of the installation process and works as a valuable tool for the customer to interact with. It has a 3D viewer and toggle capability that allows a customer to view the sprinkler pipe from a different angle behind the installed soffit concealment system. It gives a different view and additional understanding of how the system functions.

The new site was also redeveloped as a responsive website that is suitable for both mobile and desktop devices. This allows for ease of access to the Soffi-Steel[®], JGI Interlock[™] or AlumA-Fit[™] Concealment Systems for contractors, architects and engineers that are either in the office or on the job-site. This adaptation makes it easier to view the product information, specifications, cut sheets, CAD drawings and photos on your mobile device.

Take a tour at www.JGIUS.com, interact with the animated video and connect with JG Innovations on your device. Let JG Innovations know how they can help you complete your next construction project.

For more information, visit www.JGIUS.com or call 1-888-933-2248.

Smith-Cooper International Introduces New Trim Kit Package for Grooved Riser Check Valve

Smith-Cooper International (SCI) is proud to introduce a new product combination for shotgun installations in wet pipe fire protection systems: a UL Listed and FM Approved Grooved Riser Check Valve with Trim Kit Package.



Part of SCI's broader COOPLOK[™] grooved product portfolio, the Grooved Riser Check Valve weighs up to 75% less than competitive products, meaning it is easier to install, less costly to ship, and safer to handle in the warehouse. The check valve and the FPPI[®] gauges included in the trim kit are rated to 300 PSI. The check valve body conforms to ASTM A536, 65-45-12.

SPRINKLING OF NEWS

Available in five sizes from 2.5" to 8", the SCI Grooved Riser Check Valve can be used in both horizontal and vertical applications. Additional value-added features include an EPDM coated disc and bronze seat, groove dimensions to AWWA C-606 and an interior and exterior fusion bonded epoxy coating.

The Grooved SCI Riser Check Valve and new Trim Kit is available through SCI's nationwide network of fire protection wholesalers and distributors. To learn more about this product and others visit www.smithcooper.com.

Asurio, Inc. Announces New Version of BirdDog Cloud-based Mobile Inspection Software

Asurio, Inc. (www.asurio.com), announces a powerful, new version of its BirdDog software for mobile inspections. BirdDog 6.0 offers a simplified, integrated user interface, and powerful new features to speed & streamline the process of mobile inspections.

This new version of BirdDog Mobile Inspection Software is available immediately to new customers. Existing customers already using BirdDog will be gradually transitioned onto the new, integrated technology platform in 2019. In addition, Asurio, Inc. is a Microsoft partner, and will be hosting BirdDog on the Microsoft Azure cloud computing solution, resulting in world-class 24/7 reliability and security.

What Does BirdDog Mobile Inspection Software Do?

BirdDog mobile inspection software allows users to:

- Perform field inspections & data collection
- Store the data on a tablet or mobile device
- Upload the data from the tablet to the BirdDog system
- Manage & share the inspection or audit data
- Develop a wide variety of reports based on a single inspection

Here are highlights of enhancements & additions to BirdDog Mobile Inspection Software:

- New, Integrated Platform: Asurio engineers have integrated the field inspection software and administration software into one combined platform.
- Support for Microsoft, Android & Apple: This new version of BirdDog Mobile Inspection Software operates on the top 3 standard technology platforms: Apple, Android & Microsoft. As a result, field techs can use Apple, Android, or Microsoft tablets to record inspection results. BirdDog also can work in "off-line" mode on all 3 mobile platforms. This means that field inspectors working deep in the heart of a building where they can't access a wireless internet connection can conduct their inspection, save the data, and upload the inspection results once they can access a viable internet connection.
- Enhanced, Digital Inspection Forms with Additional Information Fields: Asurio engineers also have added helpful, new information fields, including: Individual locations of

continued on page 100

SPRINKLING OF NEWS

continued from page 99

multiple deficiencies such as painted sprinkler heads, category of deficiencies, and more.

- New Fire Extinguisher Inspection Module: BirdDog's new fire extinguisher module has asset tracking capabilities allowing inspectors to take full advantage of fire extinguisher serial and manufacturer bar codes for improved productivity using "auto answer" feature where fire extinguisher information auto-populates for selection by the inspector;
- New Field User Interface: The field inspector interface has been re-designed so it's simpler and easier to use, with more information that auto-populates. The new field interface also is easier to read in bright light and low-light environments.
- New BirdDog Application Program Interface (API): Asurio also offers an application program interface (API) based on the BirdDog Inspection Software engine. This new API makes it easier for developers to incorporate inspection functions into software solutions they are developing. In addition, the BirdDog API meets a critical need: allowing inspection results to easily be formatted & uploaded to agencies providing inspections oversight such as fire departments, inspections departments, and third-party administrators contracted to alert building owners of required actions following inspections.

For more information, or to request a quote, visit: www.asurio.com, or call: 303.444.1395.

Johnson Controls Launches TYCO[®] DV-5A deluge valve that offers advanced, streamlined features

The new TYCO[®] DV-5A deluge valve from Johnson Controls offers improvements on the DV-5 valve while keeping the original key features valued by customers. The DV-5A deluge valve has a higher pressure rating of up to 300 psi and lower pressure drop, allowing water to travel further at specified system pressure.

The new model features a reduced footprint, thanks to a compact trim package that helps make it easier to install and maintain. The DV-5A also includes an integrated alarm port that eliminates a check valve in pre-action systems.

The DV-5A maintains many desirable features of the DV-5, including the single moving part diaphragm design for easier maintenance and operation, as well as an external reset, which reduces the number of steps to bring the valve back in operation after activation. The DV-5A comes with a corrosion-resistant epoxy coating ideal for harsh environments, such as industrial processing plants and outdoor installations.

To learn more about the DV-5A deluge valve, visit www.tyco-fire.com/DV5A.

For more information, please visit http://www.johnsoncontrols.com/.

Johnson Controls brings innovative technologies to data centers

Johnson Controls announces a broad range of new, industryfocused products to support the unique needs of data centers. Developed in response to data center customers facing the challenge of complex environments and water scarcity, these advanced products help data centers lower power and water usage effectiveness (PUE and WUE) as well as total cost of ownership (TCO). Our products also provide data centers with innovative fire suppression solutions.

Our operations, maintenance and repair services reduce unplanned downtime, increase asset life and reliability, and ensure productive environments. With data-enabled analytics our customers can choose from a suite of predictive maintenance applications such as Smart Connected Chillers, Enterprise Management, HVAC Vibration Analysis, Metasys[®] Performance Verification, Predictive Utility Cost Optimization and Remote Operations Services.

Products designed specifically for data centers include:

YORK[®] Mission Critical Direct Evaporative Cooling (DEC) Air Handling Units (AHUs) yield an ultra-efficient, partial-power usage effectiveness (pPUE) of less than 1.1. YORK[®] Mission Critical Air Handling Units are designed to meet phased data center expansion strategies and feature high media efficiency to reduce water usage.

The YORK[®] YVFA Free-cooling VSD Screw Chiller uses integrated, high-efficiency air-to-liquid free cooling coils to reduce or eliminate the need for mechanical cooling when ambient conditions allow..

The ANSUL Acoustic Nozzle, in combination with an INERGEN Fire Suppression System, can be used to suppress fires in server rooms and data centers where sound levels may affect sensitive electronic equipment.

During a fire event, it's critical the hazard is suppressed without damaging valuable equipment. The AquaMist[®] Ultra Low Flow (ULF) is an FM-approved pre-action, high-pressure solution that releases up to 80 percent less water compared to a traditional pre-action system.

Johnson Controls Enterprise Management is a comprehensive, cloud-based platform that proactively analyzes building data and helps find opportunities for improved performance.

As surges in server density put pressure on existing cooling infrastructure, Johnson Controls Central Plant Optimization (CPO) can offer improved power usage effectiveness and better use of existing infrastructure to meet growing cooling loads.

For more information, please visit http://www.johnsoncontrols.com/



Viking Releases Enhanced Valve and System Support Mobile App

The Viking Corporation has released an updated version of its *"Valve & System Support"* smart phone app. In addition to wet and dry systems, this new release includes select deluge and preaction systems. For each system type, customers have access to a wealth of information including technical data, service and repair videos, system animations, and detailed troubleshooting support.

Once the camera has recognized the valve, a model of the valve trim is overlaid on top of the valve, including labels of key trim components. This feature provides service technicians with a quick orientation to a given Viking system.

The application features 30 new product maintenance and repair videos. If repair to a valve is recommended, customers can quickly identify the service parts needed and submit a request to Viking SupplyNet for the required parts. Users can also follow detailed, step-by-step troubleshooting for a wide variety of service and maintenance topics, and review dozens of FAQs, conveniently organized by system type.

The Viking Mobile App is available for both Android and iOS. Customers can download from Google Play or the Apple Store by searching for "Viking Valve." Additional deluge, preaction, and flow control systems are scheduled to be included in future releases.

For more information, visit www.vikinggroupinc.com or call 800.968.9501

Core & Main Completes DCL Fabrication & Supply Inc. Acquisition

Core & Main LP has closed on its previously announced acquisition of substantially all of the assets of DCL Fabrication & Supply Inc. (DCL). Going forward, DCL will operate as DCL Fabrication & Supply, a Core & Main Brand. DCL is one of the leading providers of fire protection product fabrication and distribution in the St. Louis area and broader Midwest region. Financial terms are undisclosed.

Visit www.coreandmain.com to learn more.

It happens fast!



U.S. fire departments respond to an average of one home fire *every 86 seconds*.

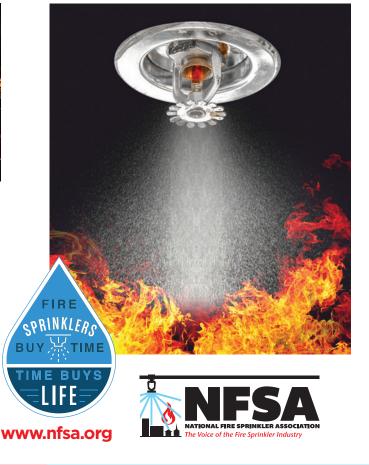
On average, seven people per day die in U.S. home fires where fire sprinklers are not present.

Fire sprinklers can control and may even extinguish a fire in less time than it would take the fire department to arrive on the scene.

In a home with sprinklers, the average *property loss per fire is cut by about 70% compared to fires where sprinklers are not present.* Residential fire sprinkler systems cut the risk

of dying in a fire by about 80%.

Luckily, so does this!





From Maine to California, and every place in between, NFSA Regional Managers bring the best of the Association right to your doorstep. Helping our members is Job #1.



New England Region

MICHAEL YOUNG Regional Manager

CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, VERMONT

Legislative Activity in the New England Region MASSACHUSETTS

Representative Ruth Balser has filed a "Local Option" Bill to allow cities and towns to require residential fire sprinklers in 1 & 2 Family Dwellings by amending MGL Ch.148 s26H. Currently the Massachusetts State Building Code does not follow the ICC IRC "Model Code" requirement for fire sprinkler protection in new single-family homes.

A ruling by the Superior Court has upheld a decision of the Fire Sprinkler Appeals Board in a case involving the Fitchburg, MA. Fire Department and a substance recovery facility. The "Fitchburg Case" involved an order by the Fitchburg FD to install a fire sprinkler system at "Crossing Over, Inc." which operates a sober house for 8 individuals in recovery. The Fire Department issued the order in compliance with MGL Ch.148 s.26H. That order was appealed to the MA Fire Sprinkler Appeals Board, which ruled for the fire department. Crossing Over, Inc. brought the case to the MA Superior Court on Appeal, where the Court upheld the previous order to install fire sprinkler protection.

RHODE ISLAND

A proposed "Check the Box" bill to require builders to 'offer' information on residential fire sprinklers in new homes to buyers will be debated during the 2019 legislative session.

NEW HAMPSHIRE

A bill has been submitted to remove the requirement for fire sprinkler protection in day care facilities as long as there are two means of egress in the building.

CONNECTICUT

Efforts to push for fire sprinkler protection in Townhouse Units have once again failed to gather support. The Codes and Standards Committee could not garner enough votes to pass on the bill to the legislature.

Efforts are still ongoing to create "limited License" classifications F5/F6 to enable installation of Stand Alone fire sprinkler systems in 1 & 2 Family Dwellings by plumbers who qualify for certification in the new designation.

MAINE

Maine is hearing testimony on requirements for fire sprinklers in substance recovery facilities and their potential designation as single-family dwellings. Maine Legislators are carefully following the "Fitchburg Case" ruling just released in Massachusetts Superior Court.

Training

Online Training Available: https://nfsa.site-ym.com/store/ListProducts.aspx?catid=603805

TECH TUESDAYS:

https://nfsa.org/online-training/technical-tuesdays/

March 19, 2019 at 10:30 EST Using UFC and NFPA Standards for DoD Projects Presented by Mark Hopkins, P.E., Vice President of Engineering

April 16, 2019 at 10:30 EST **The IFC for Fire Sprinkler Contractors** *Presented by Jeff Hugo, Manager of Codes*

May 21, 2019 at 10:30 EST **Proposed Updates to NFPA 25, 2020 edition** *Presented by Vince Powers, ITM Specialist*

June 18, 2019 at 10:30 EST

Recommended Practices for Insulation *Presented by Kevin Hall, P.E., Manager of Engineering Research*

In-Class Seminars:

http://members.nfsa.org/events/event_list.asp?show=&group =&start=9%252F30%252F2011&end=&view=&cid=4692

Member Benefits

Expert Of The Day

Do you have a question about fire sprinkler engineering or codes? Have it answered on the job. NFSA members can call 443-552-4764 or email eod@nfsa.org.

Education & Outreach



The *"Managing Our Message*" Class and Side by Side Fire Sprinkler Burn Demonstration Unit held at the Connecticut Fire Academy December 5, 2018 was a great success. Attendees heard from Sandwich, MA Fire Chief P. J. Burke, Fred Durso of NFPA,



and Karen Hensel, Investigative Reporter at NBC Boston 10 on preparing for an On-Camera Interview and Press Release while operating as the Public Information Officer during an incident. The classroom session was followed by a Side-by-Side Live Burn Demonstration to illustrate the lifesaving benefits of a residential fire sprinkler system. Students then had the opportunity to work as a group to prepare a press release and deliver it on video, before a live audience, acting as a press pool, which asked questions and expected well formulated answers.



Chief P. J. Burke Sandwich Fire Department, Sandwich, MA



Investigative Reporter Karen Hensel, NBC Boston 10



Fred Durso, NFPA

Michael Young NFSA's Regional Manager / New England email: young@nfsa.org phone: 443.743.3870



New York Region

DOMINICK KASMAUSKAS Regional Manager

NEW YORK

New York State Code Officials

A few concerns have arisen around New York State regarding code enforcement officials, possibly due to the increase in construction, as well as more code enforcement officials being hired (or not hired), and that some concerns are ongoing with a couple entities. NFSA continues to look for amicable solutions to address these challenges.

The basics for code enforcement come from New York State Executive Law. In essence, a New York State certified Code Enforcement Official (or Building Safety Inspector) is only allowed to officially enforce the code, the referenced standards, and/or state approved more restrictive local standards. Regardless of title, anyone in New York State (outside of the five boroughs of New York City, sans State Property within the city) who is in an official capacity enforcing parts or all of the Uniform Fire Prevention and Building Code (Uniform Code) and the Energy Conservation Construction Code (Energy Code) of the State must be certified by the state based on Executive Law. Code enforcement personnel appointed after January 1, 1985 are to complete a minimum basic training program within one year of their initial appointment date.

Officials should be and must be citing specific legally adopted code sections of the 2015 ICC I-Codes and legally adopted referenced standards (proper editions) until another update is enacted. As a side note; The 2019 NY State Supplement based on the 2018 I-Codes it is hoped will be enacted between Oct 2019 to Jan 2020.

Regarding "interpretations" by an official, many NFSA members know, our Expert of the Day program has proven useful in issuing informal interpretations from NFSA Engineering, which often are readily accepted and filed by the official during differences of opinion or lack of a source to cite.

> Dominick Kasmauskas CFPS NFSA's Regional Manager / New York & Pennsylvania email: kasmauskas@nfsa.org 1971 Western Av. #223, Albany, NY 12203 Phone: 518.937.6589

> > continued on page 105

It's your time to get creative!

The September/October issue of NFSM is our 2nd Annual Member Takeover Issue!

Don't miss your chance to tell your story to fellow members!

Story ideas:

- Brag on a great employee
- Tell us about a great project you worked on
- Let us hear "your fire story" what made you get into the industry?
- What is your organization doing to make a difference in your community?

and lest we forget...

• Can anyone beat Kent Mezaros' mom's cheesecake recipe?



Deadline for submissions is June 11th! Mark your calendars and get your Hemingway on!

Send submissions to NFSM Editor Joanne Genadio at genadio@nfsa.org



Mid-Atlantic Region

DELAWARE, NEW JERSEY, PENNSYLVANIA,

New Jersey High-Rise Report Featured in FPC Magazine

The NJFSAB's hard work was recognized in the latest issue of FPC Magazine! Last year, NJFSAB staff worked to survey every highrise in the Garden State, documenting which buildings were fully or partially sprinklered, and which ones did not have protection. To date, there are over 400 high-rises in the state that are not fully protected. NJFSAB members are proud that their work has been recognized and hope that this report sheds a light on a pertinent life-safety issue in the Garden State.



Maryland Region

TERIN HOPKINS Field Service Coordinator

MARYLAND, VIRGINIA, WASHINGTON D.C.

Fire Sprinkler System Puts Out Apartment Kitchen Fire in Callaway

On Monday, February 4, 2019, at approximately 1:00 p.m., firefighters responded to a report of a structure fire at an apartment building in Callaway.

Crews arrived on the scene to find no evidence of fire. Upon further investigation, firefighters found a slight haze of smoke in one apartment with an extinguished fire on the stove. The fire was extinguished by the building's fire sprinkler system.

Firefighters advised the fire was out and secured the power and water to the residence.

No injuries were reported.

Terin Hopkins NFSA'S Regional Manager / Maryland email: thopkins@nfsa.org (cell) 443.745.4142 (office) 443.7433858





Southeast Region

BRIAN BIGGS Regional Manager

ALABAMA, GEORGIA, MISSISSIPPI, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE

Georgia Fire Service Legislative Day

NFSA President Shane Ray, Director of Field Operations Gary West and Southeast Regional Manager Brian Biggs attended the Georgia Fire Service Legislative Day. The event was sponsored by the Georgia Office of Insurance & Safety Fire Commission, Georgia State Firefighters Association & Georgia Association of Fire Chiefs. NFSA did a side-by-side live fire training demonstration burn for the Fire Officials and Legislative Representatives. Over 150 were in attendance. NFSA also donated a side-by-side live fire training demonstration trailer to the Georgia Office of Insurance & Safety Fire Commission.

Sprinkler Save at Thompson-Boling Arena in Knoxville, Tennessee

On February 22nd, the Knoxville Fire Department responded to a small grease fire that activated one sprinkler at Thompson-Boling Arena. The single sprinkler controlled the fire until the fire department arrived. Fire Captain D.J. Corcoran stated there was a little smoke and water in the area of the concourses, and firefighters had it under control within 10 minutes.

No injuries were reported. And that is the #fastestwater difference!

Calendar of Events MAY

TFSCA Associate Member Appreciation Cookout

When: May 9, 2019 at 12:00 noon CST

- Where: Associated Builders and Contractors Building located at 1604 Elm Hill Pike, Nashville, Tn 37210
- Chefs: Richard Smith and Eric Briley
- Menu: Catfish and BBQ, with all the trimmings.
- Cost: No Cost...lunch is on us

JUNE

Golf Outing with the Tennessee Fire Sprinkler Contractors Association

Dean Cornwell Golf Classic June 11th

Twelve Stones Golf Club 1201 Twelve Stones Crossing Goodlettsville, TN 37072.

More Details to come!

JULY

July Meeting of the Tennessee Fire Sprinkler Contractors Association

The July meeting of TFSCA will be held on July 11th, 2019 in the Jackson at The Double Tree. If you need a room, call 731.664.6900



continued from page 105 **SEPTEMBER**

TFSCA & NFSA Fall Fling Conference

Fall Fling September 25th – 28th in Pigeon Forge area location tbd. Meet and Greet on Sept 25th at 6:00 p.m.

Training session Sept 26th & 27th 8:00 a.m. – 12:00 p.m. each day. Sept 28th- General Business Meeting 9:00 a.m. – 10:00 a.m.

Golf outing starting at 11:00 a.m. Banquet/Dinner at 7:00pm. All times for Fall Fling are EST.

> Brian Biggs NFSA'S Regional Manager / Southeast email: biggs@nfsa.org Phone: 615.642.9717



Florida & Puerto Rico

LORRELL BUSH Regional Manager

FLORIDA, PUERTO RICO

4000 Students at University High School in Orange City Learn About Fire Sprinklers!

The 13th Annual Volusia County EMS/Military Expo held at University High School in Orange City welcomed 4000 students. These students were shown options for careers after high school, many that did not require college degrees.

FFSA was invited to be a part of this event with Southern Fire of Orlando. The students heard the story of Michael Minger losing his life in a dormitory fire from his mom, Gail Minger, representing Common Voices. They also witnessed a side-by-side fire sprinkler demo that showed them how quickly fire sprinklers could save a life. Students were told of the many careers available in the fire sprinkler industry. A great event, with many opportunities. Special thanks to Common Voices and Southern Fire of Orlando.

> Lorrell Bush NFSA's Regional Manager / Florida & Puerto Rico email: bush@nfsa.org 2025 Droylsden Lane, Eustis, FL 32726 Phone: 352.589.8402 Cell: 954.275.8487, Fax: 561.327.6366



Great Lakes Region

RON RITCHEY Field Service Coordinator

INDIANA, MICHIGAN, OHIO, WEST VIRGINIA, KENTUCKY

NFSA Indiana Chapter Welcomes President Ray



The recently formed Indiana Chapter of NFSA held their first official Board and Chapter meeting at Maggiano's Restaurant on February 12th. The meeting was very well attended. NFSA President Shane Ray was in attendance and presented valuable information regarding national initiatives that was well received. Indiana State Fire Marshal Jim Greeson thanked everyone for their efforts in promoting and providing fire sprinkler systems that save lives and property. Jake German, our lobbyist with Barnes and Thornburg, provided valuable information about current legislation being discussed during the current session. NFSA Director of Field Operations Gary West and NFSA Area Director Jon Ackley were also in attendance.

> Ron Ritchey Regional Manager, Great Lakes Region 3311 Dover Court, Lafayette, IN 47909 Phone: 765.412.6707 email: ritchey@nfsa.org

> > continued on page 106







Illinois Region

BOB TINUCCI State Coordinator

ILLINOIS

Sprinkler System Credited with Preventing Major Damage at Rockford, Illinois Business

A fire sprinkler system is being credited with preventing thousands of dollars in damages at a Rockford business

On February 6th, a fire broke out at Barnes International shortly before 1:00 a.m.

According to Rockford Fire, crews saw smoke from the building, but most of the flames were extinguished by the building's sprinkler system, limiting the damage and allowing firefighters to put out the remaining blaze with fire extinguishers.

Officials stated the fire was accidental. No injuries were reported.

Bob Tinucci NFSA's Regional Manager / Illinois email: tinucci@nfsa.org. 6401 Richmond Avenue, Willowbrook, IL 60527 phone/fax: 630.655.1875 / cell: 630.514.1601 The arsonist stood on the sidewalk outside the door and watched the inside of the building, then entered through the broken door. No explosion or fire was visible then, according to federal prosecutors.

The person returned to the building several hours later, surveillance video showed. Prosecutors say Kaster walked to the Planned Parenthood door with something in his left hand about 4 a.m.

By 4:03 a.m., smoke billowed from the broken glass door of the Planned Parenthood building. Kaster fled out of view of the surveillance camera, according to affidavit.

A fire sprinkler system put out the fire before fire crews arrived. There was moderate damage to a room and its contents.

> Paul Richard NFSA's Area Manager / Missouri email: richard@nfsa.org Phone: 443.312.2207



North Central Region

TIM BUTLER Regional Manager

IOWA, MINNESOTA & WISCONSIN

Burn Aid Golf Invitational-Save The Date

The **Burn Aid** Committee met on February 28th to kick off the planning for this year's annual golf invitational and fundraiser. This year, **Burn Aid** will be held on September 9, 2019 at the Dellwood Country Club in Dellwood, Minnesota.

For the last 22 years, this event has provided funding to support the Burn Unit at Regions Hospital. To date, more than \$1.2 million has been raised and donated to the Unit. The donations help buy equipment, support special treatment and support programs, and enable burn victims to attend summer camps for survivors and families.

The **Burn Ai**d Committee consists of members of the Burn Aid Foundation, the NFSA Minnesota Chapter, Regions Hospital, and the Minnesota State Fire Marshal's Division.

For more information, visit www.burnaidfoundation.org.

2019 Tournament Information

Where: Dellwood Country Club

When: September 9th, 2019

Cost: \$275 includes lunch, 18 holes of golf, range balls, riding golf cart, dinner

Format: Four-person scramble. Form your own team or have Burn Aid Foundation form a team for you. All ages are welcome! *Men attire:* Collared shirt, belt, shorts/pants, belt, hat, soft spikes *Women attire:* Collared shirt, skirt/shorts/pants, hat, soft spikes

Missouri Region



PAUL RICHARD Area Coordinator

MISSOURI

Fire Sprinkler System Extinguishes Arson Fire at Planned Parenthood in Columbia, Missouri

A 42-year-old man is charged with arson, accused of setting fire to a Planned Parenthood facility in Columbia.

Wesley Brian Kaster of Columbia was charged with one count of maliciously damaging a building that received federal financial assistance.

Prosecutors allege Kaster used fire or an explosive to damage the Columbia health center on Feb. 10th. According to an affidavit filed with the criminal charge, a security camera captured images of a person, later identified as Kaster, walking to the center about 2:30 a.m.

The person broke through the front door, placed the bucket inside the building, and threw a Molotov cocktail-type device inside the building.



Burn Aid Foundation Schedule:

10:30 AM	Registration begins
11:00 AM	Lunch
11:45 AM	Group picture
11:45 AM	Burn Demonstration
Noon	Shotgun start
5:00 PM	Reception and basket raffle
6:00 PM	Dinner & Program

In case of inclement weather, regular golf will be cancelled. Reception, raffle, dinner, and program will proceed as scheduled. Contact Regional Manager Tim Butler at butler@nfsa.org with any questions.

> Tim Butler NFSA's Central Region Manager email: butler@nfsa.org office: 443.844.3674 Cell: 507.403.2264



North Central Region

MARTY KING State Coordinator Wisconsin

Sprinkler Save at Appleton, Wisconsin Apartment Building

The Appleton Fire Department added a third red bulb to the wreath as a result of an overnight fire for the 2018 Keep the Wreath Green Campaign. On Saturday, December 22, 2018 at approximately 1:27 am, Appleton Fire Department units were dispatched for a report of a fire in an apartment building. Additional information upon dispatch was that the building was being evacuated. While units were responding, dispatch indicated that the fire was out.

Upon arrival, fire crews found smoke throughout the apartment and it was confirmed that the residents had evacuated. It was also confirmed that the fire was extinguished by a sprinkler in a bathroom. Crews checked for fire extension in the structure and conducted ventilation. The fire investigation determined that the fire started in a garbage can in the bathroom. Improper disposal of smoking materials was a factor in the fire. No injuries were reported.

> Marty King NFSA's State Coordinator / Wisconsin email: king@nfsa.org 3317 South 113th Street, West Allis, WI 53227 Phone: 414.531.9542



North Central Region

TOM BRACE Minnesota State Coordinator

NFSA Presence at Minnesota Home and Garden Show a Success!

NFSA's Minnesota Chapter had a booth at the Minneapolis Home and Garden Show in March.

The booth was staffed by members of the industry and various fire service organization who share the NFSA Mission. Chapter President Sean Flaherty took the first shift along with Minnesota State Coordinator Tom Brace.

Throughout the first day, three other local fire officials joined the group. One person was a public fire safety educator from a large contract fire department that covers three northern cities. Another individual is a City Fire Marshal who also chairs the Fire Chiefs' Pub Ed committee. The final person is a public educator for the Saint Paul Fire Department. Our new Regional Manager, Tim Butler, joined the group at the end of their shift. Booth staff fielded some very interested questions from some of the public attendees. The questions ran the gamut of technical to political.

The Chapter had a short quiz that was taken from time to time about sprinklers in a rather low-tech presentation that was designed for children. Adults wanted to take it as well, and many times a good conversation ensued. This prop was brought by the St. Paul delegate. Studies have outlined the propensity of people to want to answer questions if presented in an interesting and unique manner.

Throughout the course of the year, a number of opportunities are available to staff a booth with the goal of educating the public and the participants of the various conferences. Engaged staff can make a difference. Booth staff heard comments from people who stated that they talked to them last year and sought the booth out again this year to continue the conversation.

> Tom Brace NFSA's Regional Manager / Minnesota email: brace@nfsa.org 1433 Idaho Ave West, St. Paul, MN 55108, Phone: 651.644.7800

We Here to Help!

Have you been receiving NFSA eNewsletters and notifications when you should?

Please log into your member account at **www.nfsa.org** and check your profile settings. If you experience any issues, contact Member Services at <u>memberservices@nfsa.org</u>.





Kansas Region

GARY L. WEST Director of Field Operations

KANSAS

Fire at Black & Veatch building in Overland Park, Kansas Controlled by Fire Sprinkler System

A fire at the Black & Veatch headquarters in Overland Park Monday morning prompted an evacuation of the building but caused no injuries, according to fire officials.

The fire was reported shortly after 8 a.m. on February 18th. The first crews at the scene found the building was already being evacuated. Building maintenance staff reported a fire in one of the building's electrical control panels on the first floor.

The building's sprinkler system kept the fire in check, officials said. It took crews about 90 minutes to get the fire under control.

The company sent employees home for the day, according to the fire department. No injuries were reported.

Gary L. West, NFSA Director of Field Operations email: west@NFSA.org Cell: 443.202.3621 Sprinkler Trainings with over 60 Fire Protection professionals attending!

San Antonio, New Braunfels and Plano Fire Departments have already adopted the 2018 IFC – Fire Prevention Codes! In a recent survey by the North Texas Council of Government; over 23 cities in the Dallas Fort Worth Metroplex have already adopted the 2015 International Fire Code and will soon be adopting the 2018 ICC codes.

In Houston, Common Voices Board Member Justina Page developed and hosted the 8th Annual Burn Survivor's Gala. Keynote Speakers included two Burn Survivors: Heather Meadows and Kechi Okwuchi (2019 Champion Singer on America's Got Talent). The Texas Fire Sprinkler Coalition hosted a booth with Chiefs Roland Garcia from Pearland, Texas and Randy Crim from Lake Jackson, Texas along with NFPA Regional Manager Bob Sullivan, all manning the booth!



South Central Region

CYNTHIA GIEDRAITIS Regional Manager

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

Around The Region

From South Texas to North Arkansas; NFSA South Central Members are proactively protecting their communities!



In February 2019; Chiefs' Felipe Pedraza and Jacob Salinas of the Pharr Fire Department in South Texas and John Pflasterer of the North Little Rock Fire Department in Arkansas both hosted Fire



Great Plains Region

ROBERT GEISLINGER Field Service Coordinator

COLORADO, NEBRASKA, NORTH DAKOTA, SOUTH DAKOTA, UTAH, WYOMING

Sprinkler Saves

For the last half of 2018, 17 sprinkler saves were reported in the Great Plains Region, averaging almost three per month. Occupancies saved ranged from single family homes protected by 13D systems, to an interstate tunnel system protected by a unique, engineered deluge system. Reports on these sprinkler activations emphasized that a number of lives would likely have been lost had the systems not been in place and that business interruption

Cindy Giedraitis

email: giedraitis@nfsa.org

Phone: 979.324.8934

NFSA's Regional Manager / South Central

PO Box 10403, College Station, Texas 77842.



was minimized.

As you become aware of them, please continue to share your success stories with your Regional Field Service Coordinator. The more we can show the positive impact of fire sprinklers, the more we can make our case to legislators, councils and the public!

Wyoming Fire Marshal's Association Conference

NFSA will have a strong presence at the WFMA Conference, running from May 29th through June 1st. The Regional Field Service Coordinator will be providing a presentation on strategies for incorporating sprinklers when adopting codes. A panel discussion following the presentation will bring in local fire officials and sprinkler contractors to address questions and further assist attendees in this process. Gary West, NFSA Director of Field Operations, is also scheduled as the keynote speaker for the banquet on Friday.

If you are attending the conference, please stop by the NFSA booth in the vendor area.

NFSA Seminars

NFSA Seminars are currently scheduled for Glenwood Springs (two days) in April and Colorado Springs (five days) in June. Several others within the region are also considering seminars in different locations. If you think such a seminar would be beneficial in your area, please contact your Regional Field Service Coordinator, Rob Geislinger (geislinger@nfsa.org).

> Rob Geislinger Field Service Coordinator / Great Plains Region Office: 845.878.4200 Direct: 443.312.2206 Cell: 720.457.9292



Southwest Region

BRUCE LECAIR Regional Manager

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA, ARIZONA

Blaze in High Rise Apartment in Santa Monica Controlled by One Fire Sprinkler

On February 13th, an apartment on the 10th floor of a Santa Monica 14-story high rise caught fire. Upon arrival, firefighters discovered smoke billowing from the apartment balcony

Fire officials credited a single fire sprinkler with containing the flames and preventing them from spreading into the common hallway of the building. It took firefighters 19 minutes to knock down the fire.

The flames were confined to the kitchen and living area of the unit. No injuries were reported, and the person who lived in the apartment where the fire occurred was not home at the time of the fire. Bruce Lecair NFSA's Associate Director of Regional Operations / West email: lecair@nfsa.org 25417 West Hyacinth Street, Corona, CA 92883 Phone: 951.277.3517, Fax: 951.277.3199



Northwest Region

SUZANNE MAYR Regional Manager

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

News from the Northwest Region

- As of this issue's deadline, NFSA's bill to establish fire sprinkler contractor licensing was making its way through the Oregon legislature. Oregon fire sprinkler contractors hope to join the 40 other states who require proof of expertise and experience in order to design, install and inspect water-based fire sprinkler systems.
- The Fire Sprinkler Advisory Board of Puget Sound has launched its third billboard campaign, featuring a bright Seattle city skyline and the message "Fire Sprinklers Save..." with an electronic billboard scrolling through the words "lives, property, businesses, homes, pets." There are also 10 traditional billboards throughout the south Sound area with the same message. The Board has also developed several tools to promote the industry, including a banner with "Fake News About Fire Sprinklers" debunking fire sprinkler myths, and a banner listing the many unusual structures in which fire sprinklers are installed.
- Attendees at the recent Alaska Fire and Building Official Forum learned about NFSA's free membership offer, and the opportunities to access NFSA's training and technical information.

NFSA instructors will be presenting classes at two upcoming building official conferences (registration is available through each association):

– On April 8, Chase Browning will be teaching a one-day Fire Sprinkler Plan Review class at the 2019 Oregon Building Official Association Spring Educational Institute in Eugene.

– On April 24th, Jeff Hugo will be teaching an NFPA 13, 13D and 13R 2016 Update at the Montana Annual Building Codes Education Conference in Bozeman.

Suzanne Mayr NFSA's Regional Manager / Northwest email: mayr@nfsa.org P.O. Box 7328, Tacoma, WA 98417 phone: 253.208.8467



National Fire Sprinkler Magazine

The Flagship Publication of The National Fire Sprinkler Association

NFSM Article Submission Guidelines

National Fire Sprinkler Magazine (*NFSM*), a members-only publication of the National Fire Sprinkler Association, is published six times a year. It offers Fire Sprinkler Industry news and articles of interest to Association members.

Query

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Send an e-mail or letter briefly describing your article proposal, why the topic is important, and how it is relevant to our audience. Say something about the sources of your information *(personal involvement? interviews?)* and about your present position and background. Tell us what types of photographs and graphics are available to illustrate your story. Be sure to include an email address and a daytime phone number. *NFSM* runs full-length feature articles of approximately 800-1200 words.

Feature Articles

Articles for **NFSM** should be on a topic of significant interest to the industry. Articles promoting a specific product or service will not be published. We have advertising opportunities available to boost your sales.

Writing Guidelines

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NFSM EDITOR:

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