MAY/JUNE 2008 / No. 148
Journal of the National
Fire Sprinkler Association

SQ

BUYER'S GUIDE

Inside this issue:

Economic Outlook •
Fire Sprinkler Systems Save Water •
Common Voices: An NFSA Coalition •
The Variable Orifice Automatic Sprinkler •

Reliable's New Evolution of Residential Sprinklers

We've expanded our Residential product line with TWO NEW SPRINKLERS!

RFC49

- Residential Flat Plate Concealed sprinkler
- K Factor of 4.9
- Combines attractive appearance with ½" (13mm) of cover adjustment for ease of installation
- Refer to Technical Bulletin 006

Sprinkler Spacing ft. (m)	Minimum Required Sprinkler Discharge	
	Flow gpm (Lpm)	Press. psi (bar)
12 x 12 (3.6x3.6)	13 (49)	7.0 (0.48)
14 x 14 (4.3x4.3)	13 (49)	7.0 (0.48)
16 x 16 (4.9x4.9)	13 (49)	7.0 (0.48)
18 x 18 (5.5x5.5)	17 (64.3)	12.0 (0.83)
20 x 20 (6.0x6.0)	20 (75.7)	16.7 (1.14)

F1 RES 76

- Largest K Factor on the market today
- K Factor of 7.6
- For design densities of .05 and .10
- Available as pendent, recessed pendent and CCP
- Refer to Technical Bulletins 135 and 176

With these two new sprinklers, Reliable continues to have the best combinations of K Factors for NFPA-13, 13R & 13D Residential Applications

RELIABLE ONE SOURCE
For all your fire protection needs.

Reliable®
TECHNOLOGY • QUALITY • SERVICE

1.800.431.1588
www.reliablesprinkler.com
The Reliable Automatic Sprinkler Co., Inc.
Manufacturer & Distributor of Fire Protection Equipment

May/June, 2008 • no. 148

on the cover...

NFSA's Common Voices Coalition teams up with allied organizations and the fire service at the nation's capitol for a "Day on the Hill."

ADVERTISERS

EDITOR
DAVID J. VANDEYAR

ADVERTISING COORDINATOR
JOANNE GENADIO

DESIGNER
JOHN L. SULLIVAN/SULLIVANDesign

SQ (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., 40 Jon Barrett Road, Patterson, NY 12563.

Telephone: (845) 878-4200. Subscription free to all NFSA members and member companies.

Second-Class postage paid at Mahopac, NY.

POSTMASTER: Send address changes to:
NFSA, 40 Jon Barrett Road, Patterson, NY 12563

IN THIS ISSUE

FEATURES:

DEPARTMENTS:

RFP System

for

Residential Fire Protection

NFPA 13D Applications

- Stainless Steel, TEFC Pump
- All Non-Ferrous Components
- NEMA Rated Electrical Control Box
- Narrow Water Tank Assembly
- Inlet, Outlet & Test Connections
- Custom Configurations Available

Fast & Cost Effective Installation

GENERAL AIR PRODUCTS

Call 1-800-345-8207

to request a brochure or visit our web site now to download your copy

www.GENERALAIRPRODUCTS.com

JOHN A. VINIELLO

Fire Sprinkler Industry Economic Outlook

In looking back at the previous economic roundtable discussions from the Contractors Council, business for our Industry should be very strong. Our Manufacturers and some Suppliers, however, are seeing a slowdown in activity which tracks more closely with what we have been suggesting to the Board of Directors during the past 15 months.

I believe that we are now in a recessionary cycle which will impact the sprinkler business for the next year; while backlogs remain solid, new work is slowing significantly. In fact, we are receiving reports that several large projects are being shelved for lack of financing. Contractors should not believe all is well based solely on backlogs. It may be important to reflect on why this is taking place and how long it will last.

A Look at Recent Economic History

This present recessionary cycle is being driven by the implosion of debt, while the recession that began in 2000 was driven largely by a collapse of equity markets. As you will see, this, in my view, is an extremely important difference. If you recall, the recession of 2000 was led by a significant downward spiral of the NASDAQ as the "dotcoms" went belly up. While it also involved debt – to the tune of $1 trillion worth of borrowing by the fiber optic builders like Global Crossing – it wasn't consumer debt. As the value of their stock plummeted, these tech giants ultimately went bankrupt when they couldn't repay their loans as their customers, the silicone valley "dotcomers," went under. When the dust finally settled, individual investors lost millions in the market, yet most still had homes, jobs, and cars. The beginning of the new millennium saw a surplus in the Federal Budget.

With an improved federal deficit, taxes were cut and interest rates lowered to unprecedented levels. As a result, lower interest rates temporarily revived the economy. Low interest rates made it very attractive for consumers to buy houses. Unfortunately, almost 50 percent of the people who took advantage of the $1.3 trillion in sub prime mortgages could not verify their income; very scary, but true. Foreclosures will now affect 2,000,000 families by 2009, which in turn is putting further downward pressure on housing prices. This is leading to a very ugly spiral as consumers, unable to borrow against their homes to pay their bills, are defaulting on the $2.5 trillion worth of debt in the form of credit cards, auto loans, student loans etc. Coupled with this, the wars in the Middle East resulted in a ballooning of the federal deficit to almost $10 trillion.

What does this all have to do with the sprinkler economy? In my view, everything. The present debt recession will be more demanding on our economy. When equity investors lose value in their stock, they have no recourse to get their money back. But lenders are different; when they aren't paid back, they take possession of collateral; the house, the car. If this is coupled with high unemployment – consumer spending – the engine that drives the economy, will come to a grinding halt. All building construction will be affected and our industry will not be immune to this downturn. On the plus side, when the recovery occurs within the next 18 months, there will be an explosion of sprinkler work at every level. For now, hunker down and don't be blinded by backlogs.

CALENDAR

EVENTS OF INTEREST TO NFSA MEMBERS

SEMINAR	LOCATION	DATE
Commissioning & Acceptance Testing (a.m.)	*McFarland, WI*	May 1
Fire Pump Layout & Sizing (p.m.)	*McFarland, WI*	May 1
Exposure Protection Systems	ONLINE	May 6
NFPA 13 Overview & Intro to Plan Review	*McFarland, WI*	May 6-7
Sprinklers for Dwellings	*Colorado Springs, CO*	May 8
Water Cooling Towers	ONLINE	May 20
Standpipes, Pressures and Pumps	ONLINE	June 10
The Extent of Systems	ONLINE	June 24
NFSA Two-Week Technician Training	*Providence, RI*	August 4-15
NFSA Two-Week Technician Training	*Chicago, IL*	October 13-24
NFSA Two-Week Technician Training	*Houston, TX*	November 10-21

CONTINUING EDUCATION PROGRAMS:

Professional Development – (for information call (845) 878-4200 ext. 131)

- Project Management for the Sprinkler Contractor
- Foreman and Construction Supervisor Training

Academy & On-Line – (for information call (845) 878-4200 ext. 133)

Trusted Products, Superior Design

Built to Simplify Your Installations

Because so many customers depend on you to protect their businesses, homes and other assets, System Sensor has designed waterflow detectors that are quick and simple for you to install and maintain.

Discover field-replaceable terminal blocks and delay mechanisms. That's right – days of draining your entire system just to replace a terminal block are a thing of the past. Now you can replace your terminal block in mere minutes.

Also notice front-mounted terminals that are conveniently located to simplify your installations. Offered exclusively by System Sensor, these front-mounted terminals provide easy access and visibility for wiring.

To uncover more superior features of the waterflow detectors you have come to trust from System Sensor, visit our website at www.systemsensor.com/wf or call for your free E•DOCS CD-ROM, a comprehensive resource for technical information, at **800/736-7672.**

SYSTEM SENSOR®

advanced ideas. advanced solutions.℠

800/736-7672

www.systemsensor.com

NFSA Regional Chart – April 1, 2008

Area	States	Regional Manager	Area Director
Northeast	*New York, Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont*	**Dominick G. Kasmauskas, NFSA** 1436 Altamont Ave. Suite 147 Rotterdam, NY 12303 914 414-3337 FAX (518) 836-0210	**Donald A. DeLuca** SRI Fire Sprinkler Corporation 1060 Central Avenue Albany, New York 12205 (518) 459-2776 FAX (518) 459-0068
Mid Atlantic	*Delaware, Maryland, New Jersey, Pennsylvania, Virginia, Washington, D.C.*	**Raymond W. Lonabaugh, NFSA** P.O. Box 126 Ridley Park, Pennsylvania 19078 (610) 521-4768 FAX (610) 521-2030	**Kent Mezaros** Quick Response Fire Protection 77 Pension Road, Suite 5 Manalapan, New Jersey 07726 (732) 786-9440 FAX (732) 786-9443
Southeast	*Alabama, Georgia, Mississippi, North Carolina, South Carolina, Tennessee*	**Wayne Waggoner, NFSA** 8033 Canter Lane Powell, Tennessee 37849 (865) 947-3393 FAX (865)947-5188	**Ed Davis** Morristown Automatic Sprinkler Company, Inc. 1310 Karnes Avenue Knoxville, Tennessee 37917 (865) 689-4480 FAX (865) 687-8622
Florida	*Florida, Puerto Rico*	**Dave Bowman** Florida Fire Sprinkler Association 6572 SE 173rd. Court Ocklawaha, Florida 32179 Phone: 845-519-7648 Fax: 661-455-3968	**Wayne H. Gey** Wayne Automatic Fire Sprinklers, Inc. 222 Capital Court Ocoee, Florida 34761 (407) 656-3030 FAX (407) 656-8026
Great Lakes	*Indiana, Michigan, Ohio, West Virginia, Kentucky*	**Jeff Hugo, NFSA** 1088 W. Borton Road Essexville, Michigan 48732 (845) 519-5963 FAX (989) 891-0494	**Richard A. Ackley** Dalmatian Fire, Inc. P.O. Box 78068 Indianapolis, Indiana 46278 (317) 299-3889 FAX (317) 299-4078
Illinois	*Illinois*	**Bob Kleinheinz, NFSA** 509 Dawes Street Libertyville, Illinois 60048 (914) 671-1945	**Gregg Huennekens** United States Fire Protection, Illinois, Inc. 28427 North Ballard – Unit H Lake Forest, Illinois 60045 (847) 247-4755 FAX (847) 816-0098
North Central	*Minnesota, Wisconsin*	**Daniel J. Gengler, NFSA** P.O. Box 280 Williams Bay, Wisconsin 53191 (262) 245-5255 FAX (262) 245-5258	**Richard Ray** – Alternate Cybor Fire Protection Company 5123 Thatcher Road Downers Grove, Illinois 60515 (630) 810-1161 FAX (630) 810-0685
South Central	*Arkansas, Louisiana, New Mexico, Oklahoma, Texas*	**Steven E. Randall, NFSA** 7165 Lazy Meadow Lane Frisco, Texas 75034 (972) 668-4022 FAX (972) 668-4077	**Mark D. Tate** Northstar Fire Protection of Texas 4616 West Howard Lane 2 #700 Austin, Texas 78728 (800) 394-0051 FAX (512) 833-7862
Central	*Iowa, Kansas, Missouri*	**Chris Gaut** 189 Eureka Town Center Dr. Suite 135 Eureka, Missouri 60325 (845) 803-6426 Fax (636) 410-7700	**Dennis C. Coleman** Engineered Fire Protection, Inc. 1615 South Kings Highway St. Louis, Missouri 63110 (314) 771-0033 FAX (314) 664-1619
Mountain	*Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming*	**Terry Phillips, NFSA** 1829 Meadow Drive Cheyenne, Wyoming 82001 (914) 525-4396 FAX (307) 514-0406	**Todd Little** RCI Systems, Inc. 252 South El Dorado Circle Mesa, Arizona 85202 (602) 894-8711 FAX (602) 894-8740
Southwest	*Arizona, Colorado, Nevada*	**Doyle Sutton, NFSA** P.O. Box 63213 Highlands Ranch, Colorado 80163 (845) 803-3785	
West	*California, Hawaii*	**Bruce Lecair, NFSA** 25417 West Hyacinth Street Corona, CA 92883 Tel: (951) 277-3517 Fax: (951) 277-3199 Cell: (951) 805-8992	**Jack Thacker** Allan Automatic Sprinkler Corporation 3233 Enterprise St. Brea, California 92821 (714) 993-9500 FAX (714) 993-5708
Pacific Northwest	*Alaska, Idaho, Oregon, Washington*	**Don Pamplin, NFSA** 1436 Harrison Avenue Blaine, Washington 98230 (360) 332-1948 FAX (360) 332-1962	**Jeff Bennett** The McKinstry Company 5005 3rd Avenue South Seattle, Washington 98134 (206) 762-3311 FAX (206) 763-5407
		Director of Regional Operations **Buddy Dewar, FFSA** 200 West College Avenue Tallahassee, Florida 32301 (850) 222-2070 FAX (850) 222-1752	Director at Large **Fred Kroll** Alliance Fire Protection, Inc. 998 Forest Edge Drive Vernon Hills, Illinois 60061 Phone: (847) 573-1122 FAX: (847) 573-8243 Email: fred.kroll@alliancefirepro.us

WAYNE GEY

An Ending that is but a Beginning

"What we call the beginning is often the end. And to make an end is to make a beginning. The end is where we start from." – T.S. Eliot

T.S. Eliot's words ring true as I end my term serving as our association's Board Chairman, "The end is where we start from." This is only the beginning.

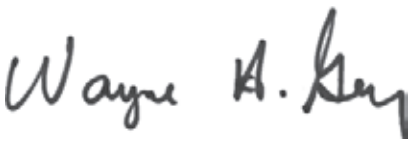
As I reflect back over the past two years, I am immediately thankful for everyone who has played a role in the accomplishments of this term. To John Viniello, and every staff member of the NFSA—thank you for your daily efforts, hard work and dedication to our association's mission. To my fellow board members—thank you for supporting the common vision and helping your Executive Committee reach many milestones. To my family—both at home and at Wayne Automatic—thank you for your understanding during my past two years of service and the travel that took me away from home. We have made a difference.

There are times when we look back and contemplate where we have been. However, it's most important to look ahead and know that we will continue moving forward on our journey. We are at a tipping point within our industry. My hope is that we have paved the way for great milestones in the future. I know that the incoming Chairman of the Board, Gregg Huennekens, is the right leader for this next leg of our journey. We are poised to see major legislative initiatives move forward at both the state and the national level. In the Fall 2008, we could see major code changes that will impact us all in a positive way, as we continue to look for innovative ways to advance our mission with our committee work and coalition support.

I challenge you as we prepare for our next phase of the journey – are you as involved as you should be? Have you considered running for the Board or volunteering to serve on a committee? The NFSA is only as strong as its membership, and we need to constantly work to increase member involvement and participation. You can make a difference, and I hope that you will consider making that commitment part of your plans for 2008.

In the 1980 book *Lonely on the Mountain* by Louis L'Amour, the opening reads "There will come a time when you believe everything is finished. That will be the beginning." As I prepare to transition from Board Chairman to Board Member, I must admit that I am ready for this new "beginning." I am a firm believer that it takes all of us in our respective roles to succeed. I look forward to my next role within the NFSA, and I hope that each of you will pause long enough to take stock and identify ways you can make the most impact. Examples of roles you can fill are all around us… the future is NOW and never before has strong association leadership been more imperative. Life is a journey, not a destination… so consider which new beginning you are going to embrace.

To new beginnings and more lives saved by sprinklers…



Construction Mechanic's Liens

By Stuart Zisholtz

There are two types of Construction Mechanic's Liens, private improvement and public improvement.

In a private improvement project, the lien owner's property is placed in jeopardy when you file a lien. If you are a general contractor, you attach the owner's property. As a subcontractor, you attach the owner's property, but only indirectly and only to the extent that the owner may owe money to the general contractor. The ultimate result is a Judgment in Foreclosure and the sale of the owner's property.

In a public improvement project, the target is any money that is being held by the governmental agency for the account of the general contractor. A general contractor has a claim against the municipality or governmental agency, and the subcontractor has a claim only for whatever money the government may owe to the general contractor. The ultimate target is not the property owned by the municipality such as a school or a police station or hospital, but the monetary balance that the governmental agency is holding for the account of the general contractor.

What do you do in a situation where the municipality owns the land but the building that goes up on that land is owned privately? We had that case with the Marriott Hotel in Uniondale, New York. Mitchell Field was a U.S. Government airport that was "sold" after World War II to Nassau County with the proviso that Nassau County is never to relinquish or divest itself of the property.

The Marriott Hotel was built on Mitchell Field and we had a mechanic's lien for some $670,000 because the developers of the Marriott Hotel failed to make payments. The project was financed by the Industrial Development Administration (IDA), which was the nominal owner of the facility only for the purposes of getting financing.

We did not file the lien, but some other lawyer did and named Nassau County as the owner of the property. That lien was discharged on the ground that the lien was improperly filed against a piece of property belonging to the County of Nassau. The court knocked out the lien and that was affirmed by the Appellate Division. Ultimately, however, we were able to collect because there was a private payment bond.

Now we have other situations, such as the renovation of property in the City of New York, where the City of New York owns the property and leases it to a private developer. This took place in the Times Square area where Tishman leased the property from the City and in turn sublet it out to three of four separate entities of the Loew's Corportation. Five corporations away from the City of New York, a Loew's subsidiary entered into agreement to do construction and all of those liens were knocked out because the City owned the property, notwithstanding that there was no money coming out of the City, there was no exposure of liability to the City and there wasn't a possibility that the City could in any way be damaged.

To correct that inequity, our learned legislators in Albany created an amendment to the Lien Law that provides as follows:

"Where no public fund has been established for the financing of a public improvement with an estimated cost in excess of $250,000, the Chief Financial Officer or public owner shall require a private entity for whom the public improvement is being made to post, or cause to be posted, a bond or other form of undertaking guaranteeing prompt payment of monies due to the contractor, his or her subcontractors, and to all persons furnishing labor or materials to the contractor or his or her subcontractors in the prosecution of the work on the public improvement."

The law became effective on November 18, 2004.

In effect, this law attempts to create a situation that existed with the Marriott Hotel in Uniondale, except that with the Marriott Hotel the bond was filed voluntarily. To anyone who does business with a tenant of a municipality, this amendment offers a modicum of relief. It does not authorize the filing of a Mechanic's Lien, which, in itself, is strange because the Lien Law provides that a lessee is also considered an "owner".

In any event, I caution everyone to make sure that when you sign a contract you find out if there is a bond and get a copy of the bond. That will solve a lot of problems and save a lot of grief later on if there is a falling out among the parties.

Never let your lien time lapse or expire!

For a free copy of a pamphlet pertaining to Mechanic's Liens or payment bond claims, please contact Zisholtz & Zisholtz, LLP, 170 Old Country Rd, Ste 300, Mineola, New York 11501. Telephone: 516.741.2200, FAX 516.746.1024

Best Questions

We have selected the following as the latest "Best Questions" as answered by the engineering staff as part of the NFSA's EOD member assistance program:

QUESTION 1

Defining a System for NFPA 25 Obstruction Inspections

I need some help in clarifying what is required to comply with the code's intent for an obstruction investigation for a multi-story building with standpipes and floor zone connections. Section 14.2.1 of NFPA 25 requires an inspection of piping and branch line conditions to be conducted every 5 years by opening a flushing connection at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of inspecting for the presence of foreign organic and inorganic material. Is it required to do the above inspection on every floor zone connection? Is each floor a separate system?

ANSWER: The correct answer is that the floor zones "can be" separate systems, but they don't have to be. In most cases in which individual floor have a flow alarm and shut-off valve, they can be considered separate systems. Many high rise buildings are retro-fitted a floor at a time, which indicates that some floors have a sprinkler system and some do not. However, even with floor control valves and alarms, if the common piping has a control valve and flow alarm then the floor alarms and valves could technically be considered sectional in nature. Ultimately the Authority Having Jurisdiction (AHJ) would decide for purposes of applying the NFPA 25 5-year inspection and similar requirements.

CONTINUED ON PAGE 11

CONTINUED FROM PAGE 10

QUESTION 2

Pressure Drops in Hydrostatic Test with No Leaks

We are having a problem with a 200 psi hydrostatic test on a condo project. The problem is that we are losing about 5 psi even though there are no visible leaks. We think the pressure losses are due to fluctuations in temperature on the floors, like when someone opens the corridor doors and lets the cold air in from the from outside. Is there any fluctuation allowance in NFPA 13 that takes this into account?

ANSWER: The purpose of the hydrostatic test is to guarantee the integrity of the system. In other words, the purpose is to find leaks if they exist, not to make sure that a needle on a gauge stays in one place for two hours. The laws of physics cannot be suspended for those two hours. Both water and air change density with temperature, which affects system pressure in a closed system. Also, some pipe and fitting materials will slightly expand under pressure. This expansion will also result in a small drop in pressure. With large systems, a tiny expansion across the entire surface area of the pipe will cause a noticeable drop in pressure. This does not mean that anything is wrong or that the pipe is leaking. The AHJ needs to be reasonable in the application of the hydrostatic test rules. Ultimately, the purpose of the test is to prove that there are no leaks. If the pressure drops 5 psi during the first part of a 2-hour test and then remains constant after that, you can be assured that there are no leaks, since the pressure would continue to drop if there was a leak. The entire piping system may need to be inspected with the AHJ to verify that there are no leaks.

QUESTION 3

Multiple-Orifice Test Manifolds for Calculated Dry Pipe Systems

Now that NFPA 13 - 2007 allows either the use of a listed calculation program or the physical construction of a multiple-orifice test manifold using the same criteria of Table 7.2.3.6.1, is it appropriate to construct the multiple-orifice test manifold when multiple-orifice activation criteria are used? For example, if the 40-second limit is used to simulate 4 sprinklers initially opening with high-piled storage, should a 4-sprinkler test manifold be built at the most remote point of the system?

ANSWER: There is no requirement that the multiple-orifice test manifold be constructed. A regular test connection is needed per Section 8.17.4.3. This permits observation of any changes in the time needed to deliver water to the inspector's test connection, as would be used to trigger an obstruction investigation in accordance with NFPA 25. However, it should be recognized that an AHJ intent on obtaining physical

CONTINUED ON PAGE 12

CONTINUED FROM PAGE 11

confirmation of the calculation may be able to insist on the construction of the multiple orifice test manifold. In this regard the situation is similar to the "bucket test" required by some AHJs during commissioning of an NFPA 13D system. Since NFPA 13D requires a single-sprinkler calculation, these AHJs require that the flow be collected from the most remote sprinkler on the system for a certain period of time, and checked against the calculations. It is not a requirement of NFPA 13D, but has become standard practice in some jurisdictions.

QUESTION 4

Seismic Bracing for Pipe Stands

Is there any guidance or direction for seismic consideration of pipe stands? We have a job in California where we will be utilizing pipe stands to support the sprinkler pipe protecting transformers and other outside equipment. These pipe stands may be 6 to 12 feet high.

ANSWER: There are no specific guidelines for seismic bracing of pipe stands. NFPA 15 does have some guidance on sizing of pipe stands, but refers the user to NFPA 13 for all seismic requirements. The procedures involved would be similar to those used for sprinkler mains in NFPA 13. However, instead of braces extending at angles greater than 30 degrees from vertical toward the roof structure, they would likely extend at angles greater than 30 degrees from vertical toward anchorage points at ground level. The fastener load tables from NFPA 13 would be applicable to points of anchorage. Another resource would be to check with the insurance carrier for the project. They may have dealt with this situation before and have more specific guidelines to follow.

QUESTION 5

Piping Hung from Piping

We have a situation where we want to hang 1-inch pipe under our own 2-inch Schedule 10 pipe. Can we use swivel ring to swivel ring hangers to hang the 1-inch pipe from the 2-inch pipe?

ANSWER: Yes, piping can be hung from other sprinkler system piping. Annex section A.9.1.1.7 of NFPA 13 (2007 edition) states "...NFPA 13 provides the option to support sprinkler piping from other sprinkler piping where the requirements of 9.1.1.2 are met." Section 9.1.1.2 contains the performance requirements for a hanger. Therefore it must be verified that the structure and the hangers can support the weight of both piping runs. If traditional ring (as noted in your description) to not meet the necessary loads for your scenario, then you may want to look into "heavy duty rings" that are produced by a couple of the manufacturers so that the ring size fits appropriately on the pipe but can suspend heavier loads.

QUESTION 6

Small Areas of Higher Hazard

We are concerned with the protection of "overstuff" couches and chairs at our moving and storage warehouse. The fire department has indicated they want us to store these items in a cartooned condition. As

CONTINUED ON PAGE 13

CONTINUED FROM PAGE 12

you can imagine, it is not possible or logical for a moving and storage company to stock the wide variety of shapes and sizes of cartons that would be needed to accommodate every type of couch or chair coming in the door with our household storage shipments. None of the carton suppliers we contacted stock these kinds of items in our area. We had pad-wrapped the overstuff as an alternative. It is standard industry practice to store the overstuff that comes with each customer's household shipment in a stretch-wrapped condition on what is called the overstuff rack. The overstuff in our warehouse is a very small percentage of the overall square footage and volume. When one considers it is usually only the cushion part of an overstuff article that contains the foam and thus warrants the hazardous classification, that percentage of a percentage gets smaller yet. Our question has to do with interpretation of the code when these articles occupy such a small part of the overall storage shipments in our warehouse. By square footage, overstuff items occupy less than three percent of our total space. If we look at volume, the cushion part of the overstuff storage is under one percent of the total space. Does an item occupying such a small percentage govern the total sprinkler requirements and manner in which they are stored? Are we allowed any flexibility in how we handle and store these items when they are not the dominant storage article?

ANSWER: It is always difficult to deal with a small quantity of a hazardous commodity. While you may feel that this is a small percentage of your total warehouse, the reality is that a fire in this area has the potential to spread heat throughout your facility and do tremendous damage. If the sprinkler system can't put out enough water to absorb the heat, the fire will damage the structural members and potentially collapse the building. Chapter 5 of NFPA 13 gives three options for dealing with situations where there is a small quantity of a more hazardous commodity:

1) You can protect the whole building for the more hazardous commodity.

2) You can segregate the building and protect the area over the more hazardous commodity for that commodity and protect the rest of the building for the less hazardous commodity. There is no physical separation required for this segregation. However, if there is no physical separation, you need to extend the higher hazard protection at least 15 ft into the area of the lower hazard.

3) You are allowed to have a few pallet loads of the higher hazard commodity (5 or 10 in each 40,000 sq ft of warehouse depending on what the commodity is and how the sprinkler system is designed) in a space protected for a lower hazard if you randomly space the pallet loads around the building so that no two higher hazard pallet loads are next to each other.

For your situation, option 2 is probably the best choice. Keep your overstuff racks close to the water supply (system riser) where the sprinklers can discharge more water at higher pressures. Either put a wall up around the overstuff racks or design the sprinkler system to discharge the higher densities for 15 ft into the rest of the warehouse.

Option 3 might also work if you consider a single piece of furniture like a pallet load, but you would not be able to put any of those pieces next to each other. You would need to spread them around the warehouse so that if a fire started with one, it would not directly spread to an adjacent one.

QUESTION 7

Extended Spacing for Aircraft Hangars in NFPA 409

NFPA 409 (2004) 6.2.2.3 states... "The maximum distance between sprinklers either on branch lines or between branch lines shall be 3.7 m (12 ft). Is it reasonable to assume that in bays 25 ft wide that a spacing of 12 ft 6 in would be allowed as it is for Extra Hazard and High Piled storage in NFPA 13?

ANSWER: No. To begin with, Section 6.2.2.1 of NFPA 409 states that the installation must be in accordance with the applicable sections of NFPA 13 and NFPA 16 AND this standard. This indicates that the spacing requirements are an override of NFPA 13. Also, the maximum spacing per sprinkler is different. NFPA 409 allows 130 sq ft per sprinkler but NFPA 13 only permits 100 sq ft per sprinkler for extra hazard.

However, we should also point out that all the NFPA standards allow for equivalent safety levels to be employed as long as the authority having jurisdiction approves the arrangement or a registered professional engineer deems the fire protection scheme equivalent. In other words, it may be judged a reasonable arrangement depending on the use of the space and protection levels provided.

QUESTION 8

Spare Dry Sprinklers

We are having issues with the intention of NFPA 13 spare heads in respect to dry sprinklers. We have several projects for which the local authorities have been requiring a spare of each type of dry sprinkler based on temperature rating and length. We understand that it is very important to have spare sprinklers to put the system back into service quickly but this requirement has some far reaching implications for area that install a lot of dry sprinklers. On some projects we have 10 or more dry sprinklers. To have a spare of each length at a cost of about $50 each seems a bit extreme. Most owners do not even want 10 spare dry sprinklers in their way. Of course we want to be in compliance with NFPA but wonder if this is truly the intention of NFPA's spare sprinkler rules. Is this necessary?

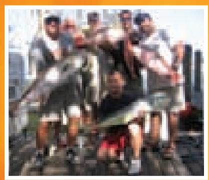
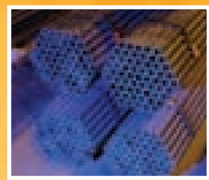
Answer: No. Section 6.2.9.4 of NFPA 13, 2007 Edition (similar text is in previous editions) states, "Where dry sprinkler of different lengths are installed, spare dry sprinklers shall not be required, provided that a means of returning the system to service is furnished." This means that exact replacements do not need to be kept on the premises, but there needs to be a plan for replacing the sprinklers so that the system is not impaired longer than necessary in the event of sprinkler activation or damage.

QUESTION 9

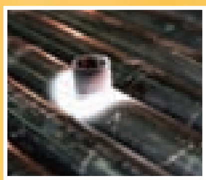
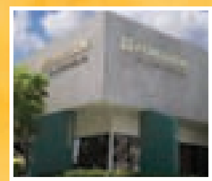
Public Water Supply vs. Unlisted Pumps

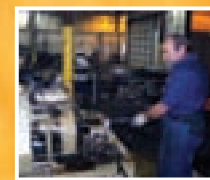
If a water supply is considered "public" and meets the requirements of federal and state government but happens to be a well, does

CONTINUED ON PAGE 15

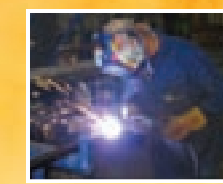
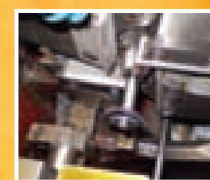





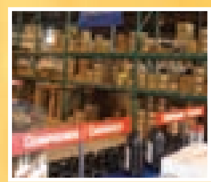
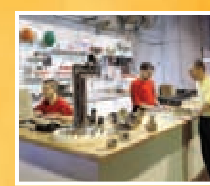
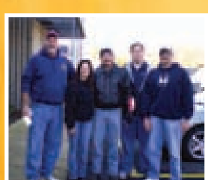
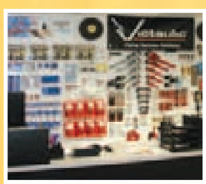
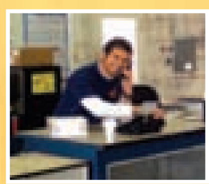



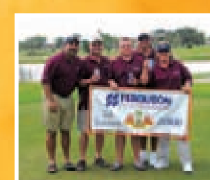





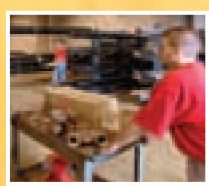
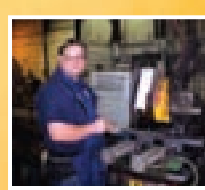
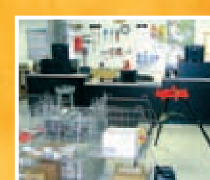
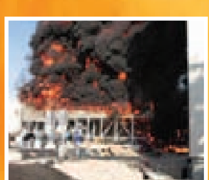





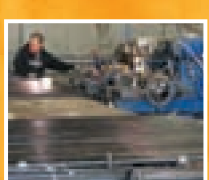


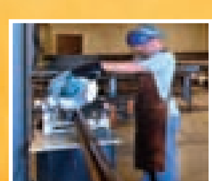










FERGUSON®
Fire & Fabrication, Inc.

Check us out on the web:
www.fergusonfire.com

CONTINUED FROM PAGE 13

the well pump then have to comply with NFPA 20? The well is question is actually (2) wells that combine to provide water for both domestic service and fire protection. The water supply is adequate in both flow and pressure to supply both.

ANSWER: No. NFPA 13 describes the different types of acceptable water supplies in Section 23.2 of the 2007 edition. Section 23.2.1 notes that the waterworks system (public supply) must be reliable, and the annex adds that, when testing the amount of flow and pressure available, reasonable worse case scenarios should be examined. However, under this arrangement the pumps that are used are under the control of the public water authority and the sprinkler system is a user of that supply.

Another acceptable type of water supply for a fire sprinkler system is a fire pump, as stated in Section 23.2.2. In order to comply with this section the fire pump must meet the requirements of NFPA 20. Other acceptable water supplies include pressure tanks, gravity tanks and penstocks of water.

QUESTION 10

Sealants for CPVC Piping Penetrations in NFPA 13R Systems

I havea 13R sprinkler system being installed in a 6 unit apartment / group home. Do the penetrations created by running the CPVC piping through the floor need to be protected with a protective collar or expanding fire corking? Currently they used just basic red fire corking to fill the voids. We do not see a lot of CPVC and any enlightenment on this subject would be helpful.

ANSWER: It is standard industry practice to use sealants around piping that penetrate a wall assembly or a floor/ceiling assembly in a building. However, there is no specific requirement in NFPA 13R. The building code would typically regulate the types of sealants necessary for a penetration. The regulations are usually applicable to fire-rated assemblies so that the rating is maintained.

The main precaution with CPVC or any nn-metallic piping is the compatibility of the sealant or mastic so that there is no chemical reaction between the two items. The CPVC manufacturer's installation instructions should have more guidance on which type of sealants can be safely used.

JUST A FEW OF THE PLACES ANSUL® FOAM MAKES PERFECT SENSE.

For that matter, advanced ANSUL Firefighting Foams protect flammable liquids wherever they are manufactured, stored, dispensed, processed or transported. Every ANSUL foam – AFFF, AR-AFFF, High-Expansion, flouroprotein and protein – is the result of extensive research, development and testing at the ANSUL Fire Technology Center. Our concentrates are tested to international standards and specifications. And ANSUL foam is delivered through a wide range of portable and fixed foam systems, generators, proportioning equipment and discharge devices.

ANSUL Firefighting Foams. No matter how you spell it, it comes out **P-R-O-T-E-C-T-I-O-N.**

www.ansulinfo.com/sq1

ANSUL® Innovative Fire Solutions | tyco

BY DON PAMPLIN

Last December I saw a sign that said…

"Win A Free Ride In A Policecar By Stealing From This Store"

The sign was located in a store in a major shopping mall. The first seven words of the sign were in large letters to attract attention, the last five words were smaller letters as the punch line of the statement. The sign then continued, *"You will get your names printed in the newspaper…won't your parents be proud!"*

Shoplifting is a major crime problem in our country and according to national experts, it starts early in the lives of children, especially in poorer neighborhoods where there is a larger percentage of single-parent families and school drop-outs. The intended threat in the shopping-mall sign of having your name shamefully printed in the local newspaper has almost no influencing effect in curtailing this type or any other type of crime. Pre-teenagers, the age group when this crime seriously starts, simply don't care about the penalties of being caught. They steal because they want the item and in their mind, that's all that matters. There is no controlling sense of right or wrong. It becomes an early cultural habit that numerous expert studies have clearly identified as a continuing path to greater levels of criminal activity.

In the world of fire protection, children can also get their names printed in the newspaper!

But unfortunately, they usually have to die or get seriously injured in a fire, which in 80% of all fires in the America, occurs in a residential occupancy. A residential occupancy includes one-and two-family dwellings (including manufactured homes), apartments, hotels, motels, college dormitories, boarding houses, etc. It's an embarrassing national problem that staggers the mind when you read the reported accounts of those fire deaths in local and network newspapers across the our nation. There isn't a state in our country that escapes these tragedies. When they read an article about each specific fire and the children's names and ages are identified, people are understandably shocked from these horrendous losses. In many situations, adults also die with the children and many times, they are the mothers.

According to the latest statistics reported in Firesafety.gov for Citizens, which reflect numerous studies done by the National Fire Protection Association (NFPA), The U.S. Fire Administration (USFA) and other credible research organizations, the United States mortality rate from fires ranks fourth among the 25 developed countries where comparative statistics are available. Consider the following U.S. statistics:

- From 1997-2006 (a ten year review), there were 3,969,500 residential fires in the United States;
- In those nearly four million residential fires, 30,564 people have died;
- Most of the victims die from smoke inhalation and not from burns;
- In that same number of fires, 151,575 people have suffered fire-related burns and injuries;
- Fires started by lighted tobacco products (principally cigarettes), are the leading cause of residential fire deaths;
- Cooking equipment, most often a range or stovetop, is the leading cause of reported home fires and home fire injuries;

The groups of people who are at the greatest risk are:

- People in the southeast of America;
- Children under age four;
- Adults ages 60 or older;
- African-Americans;
- Native Americans
- Rural communities with populations under 2,500 people;
- The poorest Americans;
- Persons living in manufactured homes or substandard housing.

CONTINUED ON PAGE 19

Don Pamplin
NFSA's Regional Manager for the Pacific Northwest.

They get it right at the site.

I don't want much. I just want it right. Viking SupplyNet gives me access to thousands of products from the most reputable manufacturers in the business so I don't have any surprises at the job site. And precise fabricating services from Viking makes a one-source solution the best solution. What I want is on-time, on-location delivery of everything I need. With Viking, I make one call and I leave it to them. For me, getting it right begins by choosing the most dependable products through a partner I've learned to trust. For over 85 years, Viking has been dedicated to fire protection, and only fire protection. They have become my one source for every aspect of an installation. You just need to look above your head to know why Viking is above the rest.

800-968-9501 • 269-945-9501 • www.vikinggroupinc.com

source

Trusted above all.™

VIKING®

CONTINUED FROM PAGE 17

In the length of time it took you to read this paragraph of statistics, another American died in a residential fire somewhere in our 50 states! That rate of incurred deaths is worse than all of the combined total number of military casualties suffered by our nation in every war we have fought since the beginning of World War One! Is it any wonder why concerned people become very passionate about the outrageous and unforgivable number of victims who die and/or are injured in a residential fire in our country every day of every year and that tragedy clock never stops.

Leading the Advocacy

As would be expected, The American Fire Service is at the forefront of this nationwide concern. They are leading the advocacy for residential fire sprinkler protection because they know and clearly understand what they can do with the limited resources they have available and their ability to arrive in time to make an interior (offensive strategy) fire attack and control or extinguish the fire in the room or area of fire ignition before "flashover" occurs. They know that it's the "Total Intervention Time" of their fire department that realistically measures their ability to provide adequate fire protection to the citizens in their communities, not a measurement of "response time" of the fire truck traveling from the fire station to the fire. Total Intervention Time is the total time from point of ignition to the time when an extinguishing agent (usually water) is applied on the fire. The average Total Intervention Time across America today exceeds 10 minutes and that's more than twice the time it takes for "flashover" to occur in the burning residence. The failure to provide an adequate Total Intervention Time is the reason why over 70% of all structure fires in America are fought in a "defensive mode of operation", that means limited or no interior fire attack and the fire department delivers a fire control strategy that hopefully can save some of the building and/or surrounding building exposures. Defensive firefighting tactics achieve almost nothing when it comes to life-safety and rescuing people from the hell's inferno in which they are trapped.

A fire that occurred in Ketchikan, Alaska on Saturday, December 15, 2007 is a classic example of this nationwide problem. The fire started just after 6:00 a.m. in a duplex in the 2100 block of Tongass Avenue on a sloping hill lot facing the waterfront. When the firefighters arrived, the kitchen was engulfed in flames as "flashover" had occurred. The owner of the building was rescued through a main floor window with the help of a police rescuer who had arrived before the fire department got to the scene of the fire.

Four children were trapped upstairs in this duplex as they couldn't make it to the small windows on the upper floor. Two of the children, a 3-year-old girl and a 5-year-old boy were dead when firefighters removed their bodies from the home. A 12-year-old girl and a 17-year-old boy were unconscious and seriously injured when they were removed from the home. They later died from their fire related injuries. None of the victims were burned, their deaths and injuries were from smoke inhalation. Fire investigation has confirmed that it was a cooking fire that was the point of ignition.

"This fire department also knows that there has never been a civilian death or a firefighter death in an occupancy that was protected by a properly designed, installed and inspected fire sprinkler system..."

The Ketchikan Fire Department knows the difficulties they face in providing adequate fire protection for their citizens, especially in a city where many of the homes have an access problem because distances to the homes are greater than 150 feet with grades in excess of 10-18%. They have before the Ketchikan City Council a proposed ordinance, #07-1583, to adopt the International Fire Code with suitable deletions, amendments and additions that would require the mandatory installation of fire sprinkler protection. This fire department clearly knows that having fire sprinklers in the home is like having firefighters on duty in that home 24 hours a day. Those fire sprinklers would be their "first-attack battalion" that would start fighting the fire before they even get the call to respond to the fire location.

This fire department also knows that there has never been a civilian death or a firefighter death in an occupancy that was protected by a properly designed, installed and inspected fire sprinkler system where the fire sprinkler system had not been compromised by a change of use or occupancy, by improper building renovations or by not maintaining the fire sprinkler system as designed for its original use.

This fire department also fully understands the fundamental responsibilities of "Duty of Care" which clearly requires that for a proper risk management application, you never promise something you can't deliver. That's why they are clearly saying to the citizens they serve in Ketchikan that there may be situations where they cannot be there in time to provide effective fire protection and EMS services. That's the reason they are asking City Council to approve Ordinance #07-1583, so they can get fire sprinkler help to make the difference between living and dying.

And guess who is opposing the requested fire sprinkler protection? You're right again! It's the Southeast Alaska Building Industry Association, headed-up by Chas Edwardson The letter he wrote to the Ketchikan City Council on December 27, 2007 was filled with the typical untruths and misrepresentations that homebuilders associations across America have been saying ever since the first fire sprinkler ordinance was proposed in California over 35 years ago!

These four children got their names printed in the newspaper but it was for nothing that they did wrong! It was because we have a national problem that could be solved with fire sprinklers. Sadly, elected officials across America keep getting detoured from approving this necessary level of fire protection because of the infamous level of erroneous lobbying from national and local home building associations!

Are You Compatible?

The only complete CPVC "System Compatible" product line for the fire sprinkler contractor.

Now you can eliminate the need to carry more than one type of piping chemical regardless of the piping system. FPPI's Sealants and Piping Compounds have been tested and have been found to be chemically compatible with BlazeMaster® CPVC pipe and fittings.

FPPI's PipeFit® Thread Sealant Paste with PTFE, LubeFit® Gasket Lubricant, and ThreadFit® Cutting Oil have all received the FGG/BM/CZ™ System Compatible designation. All of these FPPI products are subjected to rigorous third part testing and monitoring on an ongoing basis as part of the Lubrizol corporation's FGG/BM/CZ™ System Compatible Program.

FGG -BM- CZ
SYSTEM COMPATIBLE

- **PipeFit®** Thread Sealant Paste with PTFE is formulated as a low cost, high performance thread sealant. PipeFit® contains more PTFE by volume than any other similar product.
- **LubeFit®** Gasket Lubricant is a vegetable fiber based lubricant for all gasketed fittings including grooved couplings for fire sprinkler systems.
- **ThreadFit®** Cutting Oil for Sprinkler Pipe extends threading machine die life and helps increase thread quality over any other comparable cutting oil, and is *Chlorine Free*.

Proven performance in fabrication shops and in the field—FPPI's com-patible products are the only sealants and compounds specifically designed for the fire sprinkler industry.

For information on our complete line of piping compounds and sealants call **1 800 344-1822** or visit **FPPI.com**

Insist on FPPI®

F P P I®
FIRE PROTECTION PRODUCTS INC.

For a distributor near you call 1 800 344-1822 or visit FPPI.com

NFSA Creates New Training and Education Program Catalog

BY BOB TREIBER

The National Fire Sprinkler Association has produced a new Training and Education Programs catalog, available to members interested in hosting an NFSA Seminar.

If you're an AHJ, contractor, professional association or any business that needs water-based fire protection system training, the NFSA can meet your needs.

You may host a seminar by providing a training location that will hold a minimum of 30 students in a table and chair arrangement. The site needs an adequately sized screen for the room, power supply, comfortable heating or cooling system, adequate lighting, adequate blinds or curtains and restroom facilities. The sponsor is also asked to provide refreshments. If your facility meets these conditions, NFSA will allow up to three free attendees from your organization to attend or provide your organization with a contribution fee equivalent to three attendees.

You also can sponsor a NFSA seminar by selecting a contracted seminar that is based on per-day fees and includes the cost of an instructor, instructor travel expenses and projector. There is also a workbook fee per student. The contract seminar sponsor is responsible for collecting any fees that they decide to charge for the seminar.

NFSA will provide the instructor, LCD projector, high quality workbooks and professional certificates. NFSA seminars are approved in many states for building and fire official training credits, ICC & NFPA continuing education credits and NICET credits.

Following is a sample of new programs added for 2008:

Commissioning and Acceptance Testing of Sprinkler Systems (1/2 day)
This half-day seminar will cover acceptance testing requirements of NFPA 13, 13R and 13D. The student will learn the requirements for completion of the A certificates and U certificates, flushing requirements and procedures, hydro-static pressure testing criteria and the basic requirements for conducting an inspection of a new fire sprinkler to insure compliance with the NFPA Standards. The basic methodology for conducting and a system acceptance test and documentation will also be covered. Example acceptance testing forms will be provided. This seminar is intended for entry level and intermediate level students. The seminar is intended for any persons responsible for acceptance testing of a fire sprinkler system. One of the most important aspects of a new sprinkler system is to insure a correct and quality installation.

Foam Water Sprinkler System (NFPA 16) (1/2 day)
This half-day seminar covers the requirements for water-based fire protection utilizing low expansion form. The seminar will provide an overview of the requirements of NFPA 16. The student will learn about the various types of foam concentrates, foam proportioning criteria, foam supply time requirements and installation requirements of NFPA 16.

Low, Medium, High Expansion and Compressed Air Foam Systems (NFPA 11) (1/2 day)
This half day seminar provides a basic introduction into low expansion foam systems not covered by NFPA 16 and details the layout, installation and acceptance testing of low, medium and high expansion foam systems. The principle of extinguishing a fire using low, medium and high expansion will be covered. The types of foam concentrates, foam proportion systems, local and total flood foam protection will be covered. Students will conduct exercises to determine water flows and concentrate time requirements as specified in NFPA 11. A brief over view of compressed foam systems will be covered.

Fire Pump Layout & Sizing (1/2 day)
This half day seminar covers the criteria for proper layout and sizing of fire pumps in

CONTINUED ON PAGE 23

Bob Treiber
Based in Centerville, Ohio, Bob is NFSA's Director of Training & Education.

What's new from TOLCO!

NEW Swivel Attachment*

- Connects hanger rod to pitched roof
- Upper attachment for end of branch line restraint
- Seismic upper attachment for hanger rod
- Up to 90º swivel capabilities
- UL listed for 3/8" rod size, up to 4" pipe size load capacity

*Patent Pending

NEW Double Offset Hanger for CPVC*

- 1-1/2" x 1-1/2" double offset for 3/4" and 1" pipe
- Retro-fit capable, pipe "snaps" in
- No pre-installation required
- Uses standard #10 x 1" screws, supplied with all TOLCO CPVC hangers
- UL listed as a hanger and restrainer for fire sprinkler pipe

*Patent Pending

TOLCO®
a brand of NIBCO®

TOLCO™ • SUPPORTING THE FLOW™ • 1.800.786.5266 • www.tolco.com

CONTINUED FROM PAGE 21

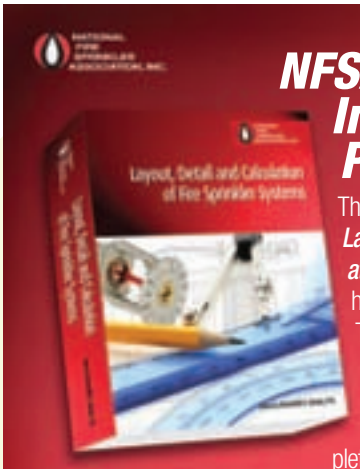
accordance with NFPA 20. The student will learn how to determine the pump suction pressure based upon available water supplies and system demands. The student will complete multiple exercise problems covering tank and municipal water supplies.

CPVC Piping Installation Requirements and Procedures (1/2 day)
This half day seminar will cover NFPA 13 requirements and industry recommendations. The student will learn about hanging requirements, expansion loops, gluing methods, fire stopping assembly requirements, anti-freeze systems and other installation requirements specified in NFPA 13 and by the manufacturers of CPVC fire protection piping. This seminar is intended for entry level and intermediate level students and any person involved with the installation, approval or inspection of a CPVC fire piping system.

Plan Review Procedures & Policies (One day)
This one day seminar is intended to educate the attendee on how to conduct a plan review of a sprinkler system. The seminar covers the methodology and systematic approach to plan review procedures. The attendee will learn how to evaluate and analyze a fire sprinkler plan for compliance with NFPA 13. Each attendee will receive copies of various sprinkler plan review check sheets that are used for compliance with NFPA 13 (1999 & 2002). This seminar is intended for those students who have attended the NFPA 13 overview seminar or those students having a good comprehension of NFPA 13.

To request your catalog, please call the NFSA Resource Center at 845.878.4299 ext. 111, FAX 845.878.4215 or email grepko@nfsa.org.

Information and registration for this seminar series is available at www.nfsa.org or by calling Dawn Fitzmaurice at 845-878-4200 ext. 133 or email: dawn@nfsa.org.



NFSA Textbook Into Second Printing

The NFSA's new textbook, *Layout, Detailing and Calculation of Fire Sprinkler Systems* has been a runaway success. The first printing sold out in only nine weeks. With more than 700 pages of information, this is the most complete text ever written for the fire sprinkler engineering technician. The second printing has arrived and is currently being sold; order your copy now before they disappear.

☐ Members $135 (+$10 s/h) + Sales Tax (NY, FL) _____ = Total: $_____
☐ Members $195 (+$10 s/h) + Sales Tax (NY, FL) _____ = Total: $_____

Name: _____ Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Email: _____

Please charge my credit card: ☐ Amex ☐ MasterCard ☐ VISA

Card #_____ Exp #:_____

Signature of Cardholder: _____

Return to: NFSA Resource Center, 40 Jon Barrett Road, Patterson, NY 12563
or Fax to: (845) 878-4215

Turning possibilities into results.

BNY Mellon Asset Management salutes those who make a difference in the communities where we live and work.

We are proud to support the National Fire Sprinkler Association, Inc.

BNY MELLON | ASSET MANAGEMENT

For more information please contact: John M. Donaghey 617-722-7315, Matthew Downes 617-722-7058, Christopher Babcock 617-722-6972 or Lee Schneider 415-399-4465.

www.bnymellon.com

Fire Sprinkler Systems Save Water

BY KENNETH E. ISMAN, P.E.

A great deal is being written these days about the need to build "Green" buildings. Not that the color of the building needs to be green. The term "Green" is being used to indicate a building that conserves natural resources and is environmentally sound. Certainly fire sprinklers figure prominently in the conservation of one of our most precious resources, water.

While water covers a significant majority of the earth's surface, it is not readily in a form that can be consumed by people. Water utilities need to take that water and treat it so that it can be consumed by people. After treating the water, the utilities distribute the water throughout a community using a series of pipes and making the water available for a variety of purposes.

When a fire occurs, the treated water becomes a ready source for fire fighting. Although the fire does not care that the water has been treated for human consumption, the distribution system developed by the water utility is usually so efficient, that it makes more sense to use this water for fire fighting than it does to go find other sources.

Fire Flow

Whenever a building is planned, there needs to be some thought put into the flow that will be necessary to fight a fire in that building. This responsibility used to be taken on by the insurance community with support from the water utilities. But increasingly, this responsibility is being passed to the building owner. Most building codes and fire codes now require some consideration of water supplies to fight a fire in a building before the plans for the building can be approved.

The term most frequently used to determine the flow necessary to fight a fire in a building is "Fire Flow". The Fire Flow that needs to be provided for a building will be a function of the building's size, use and construction. Included in part of the discussion of the Fire Flow is whether or not the building is sprinklered.

There are a number of mechanisms for determining the necessary Fire Flow for a building. In the Summer 1993 edition of Sprinkler Quarterly, I wrote an article called "Figuring Fire Flow", which described three different formulas used to determine Fire Flow: The Rate of Flow Formula, the Kimball Formula and the Insurance Services Office (ISO) Formula. Both the Rate of Flow Formula and the Kimball Formula are quick methods taught to fire fighters to use when they arrive on the scene of a fire. Neither is particularly good to use for advance planning prior to a fire. The ISO formula is excellent and has been used for more than 50 years to adequately plan for fighting fires.

Since 1993, the International Fire Code (IFC) and the Uniform Fire Code (UFC-NFPA 1) have each developed their own approach to determining fire flows. The rest of this article will compare the ISO, IFC and UFC approaches. While each of these approaches is different, they each have one item in common; they all give substantial discounts to buildings with fire sprinkler systems.

ISO and Fire Flow

The Insurance Services Office (ISO) has a fairly complicated formula for calculating fire flow in unsprinklered buildings (see the Summer 1993 Sprinkler Quarterly article discussed above for more details). This formula is dependant on the type of occupancy, the type of construction, the size of the building and any exposures near the building. The formula also assumes that the fire might involve an area of the building equal to the largest floor plus half of the remaining floors. It does not require the consideration of the entire floor area of the building.

The ISO method of calculating fire flow also considers practical maximum flows. Regardless of the construction type of the building, a single story building will have a maximum fire flow of 6,000 gpm. For other height buildings, the maximum fire flow is 6,000 gpm or 8,000 gpm depending on the construction type.

Perhaps the most important feature of the ISO method of calculating fire flow is

CONTINUED ON PAGE 27

Kenneth E. Isman, P.E.
Vice President, Engineering for NFSA. Ken represents NFSA on the NFPA Technical Committee on Sprinkler Systems Installation Criteria.

A masterpiece in fire protection.

BlazeMaster® Fire Sprinkler Systems.

From plumbing to siding to fire sprinkler systems and more...

All the pieces have now come together to solve many of today's toughest building and industrial challenges.

FBC Building Solutions™ include:

FlowGuard Gold® Pipe and Fittings
BlazeMaster® Fire Sprinkler Systems
Corzan® Piping Systems
FlowGuard® Bendable Composite Pipe
FlowGuard™ Flex 3 Layer Piping Solution
TempRite® HDX 220 Technology

For reliability, ease of installation and cost-efficiency, more fire sprinkler contractors and specifiers choose BlazeMaster® CPVC Fire Sprinkler Systems for use in residential, multi-family, high-rise, hospitals and educational facilities.

And with good reason.

- *Approved by all major building codes and complies with NFPA 13*
- *Low flame/smoke generation allowing for installation in air plenum spaces*
- *Backed by a national network of dedicated CPVC fire protection specialists to provide on-the-job assistance*
- *Only ancillary system compatible program in the world*
- *Largest national non-metallic piping system installation training program*

No overhead sprinkler system is easier to install than a BlazeMaster CPVC system. From the inventors of CPVC, it's made from a lightweight, semi-flexible material that needs no pre-fabrication and alterations can be handled on-site.

With over one billion feet of piping systems installed in over 50 countries since 1984, and with more listings and approvals than any other non-metallic fire sprinkler piping system, BlazeMaster is the most recognized and specified non-metallic fire sprinkler piping system in the world.

For fire protection that's corrosion-resistant, longer lasting, and easier and less costly to install, call **888-234-2436**. Or visit our website at **www.blazemaster.com**.

BlazeMaster®
FIRE SPRINKLER SYSTEMS

CONTINUED FROM PAGE 25

that the formula is only for unsprinklered buildings. For buildings with complete fire sprinkler systems, ISO states that the only fire flow that is required is the flow demand for the sprinkler system plus the hose stream demand.

For buildings with partial sprinkler systems, the best way to use the ISO approach would be to calculate the fire flow demand using the formula for the unsprinklered portion of the building, then calculate the sprinkler demand for the partial sprinkler system. The fire flow demand should be the greater of these two values.

The fire flow demand should never be added to the sprinkler demand in order to determine the capability of the water supply. The fire flow demand for an unsprinklered building or unsprinklered portion of a building is a statement of the water supply that will be needed assuming that there are no sprinklers. If a fire starts in the unsprinklered area and extends into the sprinklered area, a few sprinklers might open, but the flow from these sprinklers will be significantly less than the flow that fire fighters would use from their hoses. So, the sprinkler system is conserving water already reserved in the fire flow calculation. This conservation needs to be accounted for rather than penalizing the owner for having the sprinkler system.

The following examples show how fire sprinklers help conserve water in providing the fire flows for different kinds of buildings:

Apartment: A three story wood frame apartment building that is 4,000 sq ft per floor would have a fire flow demand of 2,400 gpm if there were no sprinkler system in the building. This same building, with a complete fire sprinkler system (including a dry-pipe system in the attic) would have a fire flow demand of 400 gpm (0.1 gpm per sq ft density over 2535 sq ft with a moderate factor for overage and 100 gpm hose stream demand). In this case, the ISO approach predicts that the sprinkler system will need six times less water to fight a fire in such an apartment building.

Warehouse: A large warehouse with a 30 ft ceiling for the storage of Group A plastics would have the maximum fire flow of 6,000 gpm if it were not sprinklered due to the fact that it is a single story building and due to the fact that such buildings are constructed of significant fire resistive materials. A sprinkler system for such a building would have a flow demand between 1,500 and 1,800 gpm depending on whether spray sprinklers or ESFR sprinklers were used. In this case, sprinklers reduce the amount of water that would be used in a fire by more than three times.

Office: A five story office building of fire resistive construction and floor areas of 20,000 sq ft per floor would have a fire flow of 2,700 gpm if the building were not sprinklered. If the building had a sprinkler system, the demand would be less than 300 gpm (including hose stream demand). In this case, sprinklers would use nine times less water if there were a fire in such an office building.

IFC and Fire Flow

The International Fire Code (IFC) addresses fire flow in a different manner. Section 508.1 of the Code requires the building owner to have an approved water supply for each location where a building is going to be constructed. Section 508.3 states that it is up to the Authority Having Jurisdiction (AHJ) to determine the method by which the fire flow will be calculated.

An AHJ is permitted under section 508.3 of the IFC to use the ISO approach discussed above as the method of determining fire flow for a building. In fact, many AHJ's do utilize this method of determining acceptable fire flow.

Another method of determining fire flow is provided in Appendix B of the IFC. This appendix only has the force and effect of law in a jurisdiction if the appendix is specifically adopted by name when the jurisdiction adopts the fire code. Section B105.1 states that the fire flow for a one or two family dwelling that is up to 3,600 sq ft in size will be 1,000 gpm. For other buildings, Appendix B has a table that contains recommended fire flows between 1,500 and 8,000 gpm depending on the size and construction type of the building. Interestingly, the fire flow in this appendix does not depend on the occupancy hazard. So, a 10,000 sq ft brick manufacturing facility would have the same fire flow as a 10,000 sq ft flammable liquids warehouse if they had the same materials of construction.

Section B105.1 allows the fire flow to be reduced in one and two family dwellings by 50% if the building is sprinklered. This reduction appears to apply to NFPA 13D systems as long as the systems are approved. This reduction brings the fire flow demand in small homes down to 500 gpm.

Section 105.2 allows the fire flow to be reduced in all other buildings by as much as 75% when a fire sprinkler system is installed in the building. In this section, NFPA 13 and NFPA 13R are specifically named as acceptable installation standards, however, the fire flow is not permitted to be reduced below 1,500 gpm.

It is important to note that the intent of these sections is to provide a total reduction in the fire flow demand for sprinklered buildings. It is not necessary to add the sprinkler demand to the fire flow in using this appendix. The sprinkler demand will be a part of the total water supply that will be used to fight a fire in the building and therefore is incorporated in the fire flow as it has been adjusted.

UFC and Fire Flow

NFPA 1, also known as the Uniform Fire Code (UFC), takes a very similar approach to fire flow as the IFC. Annex H in that code has a table very similar to Appendix B of the IFC. The table lays out fire flows for buildings given their size and construction type. Once again, the use of the building does not figure into the fire flow calculation.

Section H.5.1 allows the reduction in fire flow of 50% for sprinklered one and two family dwellings. Section H.5.2 takes a slightly different approach for other buildings. A reduction in fire flow of 75% is permitted for sprinklered buildings, with a minimum of 1,000 gpm. If the building is sprinklered with quick response sprinklers, the minimum is allowed to be reduced to 600 gpm.

As with the other methods of calculating the fire flow demand, it is important to note that the intent of these sections is to provide a total reduction in the fire flow demand for sprinklered buildings. It is not necessary to add the sprinkler demand to the fire flow in using this annex. The sprinkler demand will be a part of the total water

CONTINUED ON PAGE 29

Why use FlexHead flexible fire sprinkler connections?

You know how labor costs affect profitability.

The key is to give your people the tools they need to accomplish more.

Work with FlexHead Industries, and those high-productivity tools are the very equipment your people are installing!

*Flexible fire sprinkler connections from FlexHead Industries connect sprinkler heads to sub-mains at least **four times faster** than hard-pipe armovers.*

FlexHead connections slash your installation costs and make your installers more productive. You see the benefits in a more flexible schedule.

- The flexible connection between the sprinkler head and the branch line makes it easy to work around surprise obstructions in the field.
- FlexHead connections virtually eliminate punch list corrections because it's so easy to place them center of tile, and at the proper distance from the ceiling, too.

The shorter time to occupancy pleases owners. You enjoy the increased productivity with virtually *no* punch list items.

Seismically qualified.

FlexHead connections allow for independent movement between sub-mains and ceilings. They're the *only* flexible sprinkler connection to be qualified for use in Seismic Design Categories C, D, E and F. They meet all International Building Code requirements without needing an unsightly oversized ring, sleeve or adaptor where the ceiling meets the sprinkler head.

FlexHead connections are FM-approved and UL-listed. Every hose is leak-checked at the factory. Burst pressures exceed 3,000 pounds.

Superior engineering. Happier owners. More profit for your business. Isn't it time to add FlexHead to your toolkit?

Call us, write us or visit our website for the information you need to add FlexHead quality and reliability to your projects.

FGG BM CZ SYSTEM COMPATIBLE · FM APPROVED · c UL us LISTED · LPCB

FLEXHEAD® INDUSTRIES

The best idea in sprinkler systems since water

800-829-6975 ***info@flexhead.com***

*Visit **www.flexhead.com** for technical data sheets, specifications and more!*

CONTINUED FROM PAGE 27

supply that will be used to fight a fire in the building and therefore is incorporated in the fire flow as it has been adjusted.

Conclusion

Each of these methods has shown that fire sprinklers drastically reduce the flow of water necessary to fight a fire. When a building has a fire sprinkler system, the flow used to fight the fire will be two to nine times less than if the building is not sprinklered. This constitutes a significant savings in a precious natural resource.

Considering that a fire will be fought for at least an hour (sometimes more) the savings is even more significant. Even in the smallest reduction in fire flow from 1,000 gpm to 500 gpm, the sprinkler system saves more than 30,000 gallons of water (500 gpm flow for an hour). In the warehouse example above, the sprinkler system would save at least 250,000 gallons of water for each hour that the fire was fought and fires in these occupancies tend to take more than an hour to fight. The water supply durations are required to last in some cases for four hours. Therefore, it is conceivable that sprinklers could save as much as 1 million gallons during a single fire incident.

Sprinklers not only save a precious natural resource (water), they also save money. If tens or hundreds of thousands of gallons of water are NOT used in fighting a fire, then the water utility does not need to spend money preparing this water for public consumption. This money and effort is saved for times when the public needs the water. Utilities need to recognize that fire sprinklers ultimately are more efficient use of their water and encourage their use through a reduction in fees rather than charging fees for connection of sprinkler systems.

When a building owner chooses fire sprinklers for their building, they are making a "green" choice and saving important natural resources. When a community requires sprinklers for all of their buildings, they are managing the use of an important resource while controlling the demand on their supplies and the costs of water delivery, saving everyone money in the long run.

Water utilities need to encourage the installation of fire sprinkler systems. Rather than requiring tap fees and standby fees for connections to sprinkler systems, these utilities should charge everyone within 1000 ft of a fire hydrant a "Fire Flow Fee". The fire flow fee would be based on the fire flow as calculated by one of the methods discussed above and would apply to all buildings. Those buildings with sprinkler systems would have a lower fire flow, and therefore a lower Fire Flow Fee, thereby encouraging the installation of sprinklers and forcing people without sprinklers, who are going to waste water if there is a fire, to pay a higher fee.

New Members

Contractor

Laura Israel
First Women's Fire Systems Corporation
New York, New York

Jim Plummer
Thorpe Design, LLC.
Nashville, Tennessee

John Kauffman III
Kauffman Company
Houston, Texas

Fred Jeffries
National Fire Sprinklers, Inc.
Nashville, Tennessee

H. Louis Morton
Sentinel Fire Protection, Inc
Cleveland, Tennessee

Marcos Pinto
Pinto Fire Protection
Chantilly, Virginia

Danny Lanclos
Double D Piping, LLC.
Cleveland, Tennessee

Keith Kurre
Freedom Fire Protection, Inc.
North Kansas City, Missouri

John Simon
Freedom Fire Protection, Inc.
North Kansas City, Missouri

Chris Etten
Freedom Fire Protection, Inc.
North Kansas City, Missouri

Eric Steinheider
Freedom Fire Protection, Inc.
North Kansas City, Missouri

Earl Wheeler
Freedom Fire Protection, Inc.
North Kansas City, Missouri

Sean Smith
Freedom Fire Protection, Inc.
North Kansas City, Missouri

Austin Goetz
Freedom Fire Protection, Inc.
North Kansas City, Missouri

Jim Wilcox
Freedom Fire Protection, Inc.
North Kansas City, Missouri

Jason Cash
Freedom Fire Protection, Inc.
North Kansas City, Missouri

John Durso
Schmidt Fire Protection Company, Inc.
San Diego, California

Jack Zimmerman
Desert Fire Protection, LP.
Las Vegas, Nevada

Robby Cornwell
S.C.C. Sprinklers, Inc.
Hermitage, Tennessee

Michael Willis
Haines City Fire Extinguisher Service, Inc.
Winter Haven, Florida

Bonnie Retalic
K & B Excavating, Inc.
Debary, Florida

Eric Briley
Cumberland Fire Protection
Goodlettsville, Tennessee

Patrick Rogers
Rogers Pump Sales & Service, Inc.
Batavia, Illinois

Theodore LeBaron, Jr.
Production Plus Plumbing, Inc.
Camarillo, California

Paul Chavis
Phoenix Plumbing Company, Inc.
Tallahassee, Florida

Ken Brinkley
Music City Fire Sprinkler
Hendersonville, Tennessee

John Bruhn
Bruhn & Bruhn Fire Protection, Inc.
Spring Hill, Tennessee

James Key
Key Fire Protection, Inc.
Jackson, Tennessee

Jerry Key, Jr.
Key Fire Protection, Inc.
Jackson, Tennessee

David Chad Norris
United Fire Protection, Inc.
St. Petersburg, Florida

Richard Smith
Superior Fire Protection, Inc.
Nashville, Tennessee

Morgan Smith
Allied Fire Protection, Inc.
Lenior City, Tennessee

Romero Ali
RAKS Construction
Hattiesburg, Mississippi

Zare Babayan
Apex Fire Protection, Inc.
Montrose, California

Professional

Jacob Merrill
Global Fire Engineering, Inc.
Lakeland, Florida

John Josselyn
Sentinel Sprinkler Design, Ltd.
Towson, Maryland

Matt Flynn
Vertical Concepts
Raleigh, North Carolina

Todd Brand
BCER Engineering, Inc.
Littleton, Colorado

Jerome Price
Crossroads Church Services
Dumas, Texas

Aaron Juarez
Draw 4 Me Fire Systems
Modesto, California

John Vine
Capital Fire Protection Enterprises
Arvada, Colorado

Mark Eckard
Lowes Companies, Inc.
Wilkesboro, North Carolina

John Kennelly PE
Rolf Jensen & Associates, Inc.
Orlando, Florida

James Delp
Systems Approach Ltd.
Newark, Delaware

Travis Mack
MFP Design, LLC
Gilbert, AZ

Opie Athwal
Athwal & Associates
New York, New York

Subscriber
Mark Ossewaarde
King County Fire Marshal Division
Kirkland, Washington

Eugene Robinson
Reedy Creek Improvement District
Lake Buena Vista, Florida

James Kelly
Vassar College
Poughkeepsie, New York

Thomas Simpson
Harrington Park Bureau of Fire Prevention
Harrington Park, New Jersey

Salvatore DiStasio
Rutgers Emergency Services
New Brunswick, New Jersey

Kenneth Schuchardt
Rutgers Emergency Services
New Brunswick, New Jersey

Daniel Zamorski
Rutgers Emergency Services
New Brunswick, New Jersey

Scott Mullins
Eureka Fire Protection District
Eureka, Missouri

Travis Hollis
Arkansas Fire Marshal's Association
Rogers, Arkansas

Robert Northcott
Sunrise Beach Fire Protection District
Sunrise Beach, Missouri

John Higginson
Marlboro Township Fire Prevention
Marlboro, New Jersey

IFSA

Kerry Bell
Underwriters Laboratories, Inc.
Northbrook, Illinois

SAM

Bob Grace
Dixon Powhatan
Chestertown, Maryland

Robin Bauer
Dixon Powhatan
Hagerstown, Maryland

Hazen Arnold
Dixon Powhatan
Chestertown, Maryland

Joe Jordan
Dixon Powhatan
Chestertown, Maryland

Craig French
Dixon Powhatan
Winchester, Virginia

Ron Wible
Dixon Powhatan
Winchester, Virginia

Jim Purzycki
BAVCO
Long Beach, California

John Jutz
Plumbers Supply Company
Louisville, Kentucky

Mike Newton
Plumbers Supply Company
Louisville, Kentucky

Sean Post
Plumbers Supply Company
Louisville, Kentucky

Sam Alvey
Plumbers Supply Company
Louisville, Kentucky

Ron Wilson
Plumbers Supply Company
Lexington, Kentucky

Randle Jones
Plumbers Supply Company
Bowling Green, Kentucky

Brian Roberts
Plumbers Supply Company
Indianapolis, Indiana

Jason Davis
Plumbers Supply Company
Indianapolis, Indiana

Ben Smith
Plumbers Supply Company
Indianapolis, Indiana

Brent Mabrey
Plumbers Supply Company
Evansville, Indiana

Rick Persing
PHD Manufacturing, Inc.
Goshen, Indiana

Matthew Rodgers
ASCO Power Technologies (Firetrol Products)
Cary, North Carolina

William Stelter
Master Control Systems, Inc.
Lake Bluff, Illinois

Victor Tallon
Talco Industries, Inc.
Milwaukie, Oregon

Getting Through When Times Are Tough

BY KARYN HUDGENS

We are at the NFSA Annual Seminar at the gorgeous Atlantis on beautiful Paradise Island. As we lay on these beautiful beaches of the Bahamas, so serene, the last thing on our minds is the economic downturn that is very close to us. We can see it coming and although we want to look the other way, we need to prepare for it the best we can.

What is a Recession?

A Recession is an extended decline in general business activity, typically two consecutive quarters of falling real gross national product.

It is in these times that an Association works harder for its members. Hence, the member should not forget the helping hand lent by their association during trying times.

NFSA will be working harder for our members with continuing marketing support to ensure that when we come out of this recession, the industry will be stronger with new code requirements and expanded markets. Your Regional Managers are busy across the country with new fitter licensure laws as well as creating new codes that form the basis of building regulations.

There are certain procedures that a company can practice while riding this slump out. The following suggestions by Reed Holden and Mark Burton seem to be sound advice for all in the industry:

Recession Pricing Do's and Don'ts

Pricing during an economic downturn is tricky. Too often, companies simply cut prices to attract more sales. The right pricing, however, can help a company compete and even thrive during difficult economic times. Here are some pricing do's and don'ts for a recession:

DO:

- Define the value you offer to your customers. Any knowledge of the value you deliver to your customers gives you greater control over, and confidence in, your pricing. Interview your customers to find out how they view your products and services.
- Create a range of low- to high-value offerings. Bundle your products and services--and establish price accordingly--which enables you to appease both cost-conscious and value-conscious customers without cutting prices.
- Control company costs and reduce inefficiencies. Streamlining your company's processes and expenses is good for business in any economy. Reducing prices to generate more sales will not improve your business in the long term.
- Invest in innovation to offer something unique. Funnel funds into R&D so you have new products and services that give you negotiating flexibility with customers and sales growth. Innovation gives you an edge when customers are seeking something new to lift up their own financial prospects during an economic downturn or when coming out of one.

DON'T:

- Discount your products or services in order to compete. Getting into a price war with your competitors--without adjusting the value of the product or service--will just send you and your competition swirling into a downward pricing death spiral where no one wins.
- Reduce prices on your high-value products and services. During a recession, a better strategy is to keep high-value products priced appropriately, but focus on selling more low-value products and services.
- Play poker with price-driven customers. When cost-driven customers threaten to take their business elsewhere, either: (1) confidently point out the unique value your product and service offers, which justifies the price you charge, or (2) let the customers take their business and badgering to your competitor instead.

CONTINUED ON PAGE 32

Karyn Hudgens
NFSA's Director of Membership

CONTINUED FROM PAGE 31

Wm. T. Spaeder Company Celebrates 50 Years as an NFSA Member

Congratulations to the Wm. T. Spaeder Company, Inc., mechanical contractors, of Erie, Pennsylvania on their 50th anniversary as an NFSA Contractor Member. Wm. T. Spaeder Company is a family-owned business. The company was founded in 1914 by William T. Spaeder and operated out of his home until 1923 when he purchased a surplus WWI army barracks and assembled it in his backyard. It was at this time, in the early 1920's, that Wm. T. Spaeder entered the automatic fire sprinkler industry. The old barracks building served as the company's headquarters until 1957 when the company moved to a larger facility. In 1966, the company moved to its current location, in Erie, PA. The new 21-acre location includes a 31,000 sq. ft. fabrication building and a 40,000 sq. ft. warehouse facility. The company is a well equipped mechanical contractor, owning its own heavy equipment, including excavators, backhoes, cranes and a large fleet of company vehicles. Nine of Bill Spaeder's eleven children became partners in the business which is currently owned and managed by eight members of the third generation. The Wm. T. Spaeder Company now employs over 200 men and women in various positions, including 20 employees in the automatic fire sprinkler division. Although the automatic fire sprinkler division is only part of the family business, it is a significant part, according to Tim Spaeder, Partner and Automatic Sprinkler Division Manager. Tim's son Elliot has received a Bachelors Degree in Business Administration and has worked in the family business since 2006. Having gained valuable field experience, Elliot has been brought into the office by his dad in preparation for taking over the reins of the Sprinkler Division. No doubt, Elliot, a 4th generation family member, will be at the reins when the company marks its centennial in 2014. •

NFSA Mid-Atlantic Regional Manager Ray Lonabaugh (right) presents Wm. T. Spaeder Company with 50th anniversary plaque.

In tough times, cash flow is even more difficult to maintain than in good times. It is possible the reason customers aren't ordering is due to lack of cash flow. A deferred or extended payment plan may be the answer for them.

What is important is that you are willing to do something to get things moving.

If Johnny Depp walked into your workplace today, how would you behave? If you're like most people, you'd drop whatever you were doing and approach him, smiling, ready and eager to serve him. If Halle Berry walked into your restaurant, you'd immediately escort her to the best seat in the house. If Tom Hanks was on the phone asking questions, you'd do whatever you could to get him his answers...cheerfully...right?

What about the rest of your customers?

Perhaps you're thinking, "Of course, we'd treat them exactly the same way!" Maybe. In general, though, customer service has become a "buzz phrase" that is rarely lived up to. A study done by Connell and Associates (2004) found that 45% of all respondents felt that most companies simply do not provide good customer service. In a Harris Interactive Study 80% of respondents stated they had made the decision to never do business with a company again because of bad customer service.

How can you -- the business owner or service professional -- turn this trend around?

By treating your customers like stars!

As Garrett Richter, president and CEO of the First National Bank of Florida, tells his employees, "If we roll out the red carpet for billionaires, they won't even notice it. If we roll out the red carpet for millionaires, they expect it. If we roll out the red carpet for thousandaires, they appreciate it. And if we roll out the red carpet for hundredaires, they tell everybody they know."

To his point, the same Harris Interactive Study found that 60% of respondents said the main reason they would recommend a company is outstanding customer service.

Here are six secrets from the world of celebrity that will get your customers buzzing about you.

1. Give Them a Red Carpet Arrival. When a celebrity arrives for a movie premiere or a charity function, it's a big deal! There's a red carpet. There are photographers. There are hundreds of fans lined up, shouting their name and begging for a chance to spend even two seconds with the star. When the rest of us arrive at a place of business, we're lucky if we can even get someone to acknowledge us. Treat your customers like stars by showing them you're glad they came. Look up, smile, walk out from behind the counter and greet them. Most people don't need a fancy carpet or paparazzi -- just eye contact is enough!

2. Call Them By Name. Motivational guru and author Dale Carnegie said that when you remember someone's name you "make them feel important." Remember your customer's name and use it each time you see them. Make it a top priority, and you'll find remembering names easier than you think. You can also find unique ways of using someone's name. For instance, High Point University welcomes all expected guests with their own parking space designated by a sign bearing....you guessed it...their name. Some restaurants name dishes after famous people. What if you named some of your products after your best customers? Now that's the star treatment!

CONTINUED FROM PAGE 32

3. Remember and Refer. Aside from their name, remember other details about your customer as well and refer to them. When one grocery store manager recalled that the "grumpy lady who comes in on Wednesdays" had been to Chicago to visit her daughter, he asked her about the trip....and made her day! Now, that once grumpy customer seeks the man out with a smile on her face whenever she comes into the store. It doesn't take much to make ordinary people feel special. Just pay attention.

4. Cater to their Personal Preferences. While your customer may not be as picky as the celebrity who wants all the brown M&M's taken out of his candy dish, everyone has their likes and dislikes. Surprise your customer in little ways and let them know you are paying attention. In his former career as a banker, Author and Speaker Dave Timmons earned the business of a prospect after he tossed him two baseballs signed by the members of his grandsons' favorite sports team. One hotel dining room supervisor heard a guest say that she enjoyed blood oranges, so he secretly had a few brought up to her room. Delight people in this way and you and your business become unforgettable.

5. Give Them SWAG! At every awards show celebrities walk away with gift bags filled with products and paraphernalia worth thousands. There is a reason why people line up and even pay good money, to give their goods away to celebrities via the swag bag. When the superstar wears or uses their product, it creates buzz. Just watch how much press Ben & Jerry's gets next time they hold a "Free Cone Day." What kind of swag can you give your customers to get them talking about you?

6. Be Extraordinary... And Then Some. Make a commitment to be remarkable in every way that you serve your customer. Be the first one to respond. Have the widest smile in the room. Call everyone by name. Constantly be on the lookout for little ways that you can make your customer feel like the most important person in the world. When you do, you will find yourself not only with a customer for life, but with a raving fan that will go out and spread the word about their incredible celebrity experience.

The above excerpts are just some of the information found with a simple Google search. We hope that this information has been of some help to you. If you have any questions or concerns during this period, remember, The National Fire Sprinkler Association is your association and we are here to help you, so don't hesitate to contact us.

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

EUROPEAN FIRE
SPRINKLER NETWORK

7th International Fire Sprinkler Conference & Exhibition

Radisson SAS Scandinavia

24 – 25, June 2008

Copenhagen, Denmark

COPENHAGEN 2008

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

Buyer's Guide 2008

SAM Council Members:

Chuck Kitts, Chairman
System Sensor
Lansdale, Pennsylvania

Michael Berkelhammer
United Brass Works, Inc.
Randleman, North Carolina

Buck Buchanan
H-D Supply, Inc.
Devon, Pennsylvania

Robert Bussiere
Allied Tube & Conduit Corp.
Harvey, Illinois

Jim Henry
Potter Roemer
Elm Grove, Wisconsin

Gary Johnson
Noveon, Inc.
Cape Charles, Virginia

Bruce LaRue
Potter Electric Signal Company
St. Louis, Missouri

George McHugh
AGF Manufacturing
Malvern, Pennsylvania

Dean Taylor
Anvil Star
Portsmouth, New Hampshire

Frederic Barall, Secretary
NFSA
Patterson, New York

The Association would like to acknowledge the commitment and support it has received from it's SAM (Supplier And Manufacturer) members. Each company listed in the Buyer's Guide has demonstrated their dedication to the fire sprinkler industry by joining in the Association's goal to provide fire sprinkler protection where people live, work and play. Special recognition is also given to the member companies and their representatives who make up the SAM Council.

A-C Fire Pump Systems

8200 North Austin Avenue
Morton Grove, Illinois 60053
Telephone: 847.966.3700
FAX: 847.966.1914
Internet: www.acfirepump.com

Founded:
1878
Primary Products/Services:
Fire Pumps & Packages
Market Area:
Global
Hours of Operation:
8:00 a.m.-4:30 p.m. Mon.-Fri.
Management:
Hansford Stewart, Manager, Global Fire Pump Marketing
Sales Contact:
Hansford Stewart
Telephone:
847.966.3700
FAX:
847.966.1914
Company Profile:
A-C Fire Pump Systems offers an extensive line of stationary fire pumps including in lines, end section, horizontal, split case and vertical turbines. All pumps are UL listed, FM approved and meet the requirements of NFPA #20. We also offer custom engineered fire pump package systems with or without house enclosures.

AGF Manufacturing Inc.

AGF Manufacturing, Inc.

100 Quaker Lane
Malvern, Pennsylvania 19355
Telephone: 610 240-4900
FAX: 610 240-4906
Internet: www.testandrain.com

Founded:
1986
Primary Products/Services:
TestanDrain Valves
Market Area:
International
Hours of Operation:
8:30 a.m. - 5:00 p.m. Mon.-Fri.
Management:
James McHugh
George McHugh III
George McHugh IV
Sales Contact:
James McHugh
Company Profile:
AGF Manufacturing, Inc. provides a wide variety of unique products for fire sprinkler systems. Our strong commitment to customer service enables us to make a contractor's job more efficient through labor savings and more competitive through cost savings. Our entire line of products is manufactured to ISO 9002 standards. Our valves and fittings are UL and UL Canada listed and FM approved.

ACCU-FIRE Fabrication, Inc.

Accu-Fire Fabrication, Inc.

8 Progress Drive
Morrisville, Pennsylvania 19067
Telephone: 215.428.2400
Toll-Free: 800.641.0005
FAX: 215.428.0355
Internet: www.accu-fire.com

Founded:
1991
Primary Products/Services:
Fire Protection Fabrication & Supply
Market Area:
Northeastern United States
Hours of Operation:
6:00 a.m. - 6:00 p.m. Mon.-Fri.
Management:
Deardra Murphy, President
Vince Murphy, Vice President of Operations
Mike Stango, Vice President of Sales
Dan Boice, Sales Manager
Sales Contact:
Mike Stango, Vice President of Sales
Company Profile:
Our entire organization is dedicated to supplying fast, accurate, leak-free fabrication. Since our inception in 1991, Accu-Fire maintains a solid reputation for quality and service. We have a 60,000 sq. ft. production facility with six acres of pipe inventory. In addition to fabrication, Accu-Fire is a full service supplier of fire sprinkler devices. All products are delivered on our trucks fitted with 50' beams or rear-mounted forklift. Accu-Fire is an approved Women's Business Enterprise WBE.

Action Fire Fabrication & Supply, Inc.

1600 West Linne Road
Tracy, California 95377
Telephone: 209 836-6460
FAX: 209 836-6475
Internet: www.actionfirefab.com

Founded:
1986
Primary Products/Services:
Fire protection fabrication & Supply
Market Area:
California, Nevada, Oregon, Hawaii & Guam
Hours of Operation:
7:00 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Ted M. Bolls, Sr., President
Amy M. Donahoo, Executive Vice President
Odile M. Bolls, Vice President
Carmen Phillips, Office Manager
Sales Contact:
Amy Donahoo, Executive Vice President
Telephone:
209.836.6464
FAX:
209.836.6475
Company Profile:
Full service fabrication and supply. Custom formations, manifolds, Tyco, Nibco, Allied Tube, Anvil, Ward, Northwest Pipe, United Brass and much more. Featuring our own line of UL/FM segmentally welded grooved-end fittings and shaped nipples. Family owned and operated for 22 years.

Advanced Fire Technology, Inc.

4212 Gravois Avenue
St. Louis, Missouri 63116
Telephone: 314.351.5005
FAX: 314.481.0029
Internet:
www.advancedfiretechnology.com

Primary Products/Services:
Self Contained Residential Sprinkler Systems
Management:
Joe Weber, President
Brett Dickerson, Vice President

AFCON
P.O. Box 3365
South El Monte, California 91733
Telephone: 626.444.0541
FAX: 626.444.3887
Internet: www.afcon.org

Founded:
1952
Primary Products/Services:
Pipe Hanger Products, Sway Braces
Market Area:
Worldwide
Hours of Operation:
7:00 a.m. - 3:30 p.m. Mon.-Fri.
Management:
Kraig Kirschner, President
Company Profile:
AFCON began designing "Hangers That Help" in 1952. We specialize in manufacturing fire products. AFCON has the most products and patents in each hanger category, including steel hangers, CPVC Hangers, sway bracing and restraint. Our UL seismic experience exceeds all other brands combined. Sway brace designs by AFCON offer the largest pipe size and highest load ratings available. Please note the many special UL listings for our hangers and their fasteners usage. AFCON knows that smart hanger designing requires constant research and development effort. We appreciate your comments regarding hanger situations, where our designs may assist you.

Allied Tube & Conduit
11350 Norcom Road
Philadelphia, Pennsylvania 19154
Telephone: 215.676.6464
FAX: 215.673.4152
Internet: www.alliedtube.com

Primary Products/Services:
Steel Sprinkler Pipe
Market Area:
Worldwide
Management:
Steve Norvalis

Ames Fire & Waterworks
1427 North Market Blvd., Suite 9
Sacramento, California 95834
Telephone: 916.928.0123
FAX: 916.928.9333
Internet: www.amesfirewater.com

Founded:
1910
Primary Products/Services:
Backflow Prevention
Market Area:
North America
Management:
Dave Johnson, Sr. Vice President Sales, Wholesale
Bruce Parrott, Vice President of Sales Administration
Sales Contact:
Rick Ferguson, National Sales Manager-Backflow Products
Telephone:
916.928.0123
FAX:
916.928.9333
Company Profile:
Ames Fire & Waterworks designs, manufactures and sells an extensive line of backflow preventers, automatic control valves, pressure reducing valves, backflow test kits and related flow control products. Ames features lightweight stainless steel construction, low pressure loss and optional grooved-end butterfly shutoff valves with integral tamper switch. Optional body configurations include horizontal, vertical flow up, vertical flow up and down N-shape and Z shape.

Ansul Incorporated
One Stanton Street
Marinette, Wisconsin 54143
Telephone: 715.735.7411
FAX: 715.732.3608
Internet: www.ansulinfo.com/99

Company Profile:
Ansul is the premium fire suppression product range, which is part of Tyco Fire Suppression & Building Products, The full line of Ansul special hazard fire protection products includes fire extinguishers and hand line units; pre-complete line of dry chemical foam and gaseous extinguishing agents. Ansul products are developed and tested at the Ansul Fire Technology Center, one of the most extensive fire research and testing facilities in the markets such as aviation, marine, military, mining, chemical and petro-chemical, utility and metal manufacturing/processing industries.

Anvil International, Inc.
110 Corporate Drive, Suite 10
Portsmouth, New Hampshire 03801
Telephone: 603.422.8000
FAX: 603.422.8033
Internet: www.anvilintl.com

AnvilStar™
Fire Products Division of Anvil International

AnvilStar- Division of Anvil International
750 Central Avenue
University Park, Illinois 60466
Telephone: 708.534.1414
Toll Free: 800.301.2701
FAX: 708.534.5441
Internet: www.anvilstar.com

Founded:
1999
Primary Products/Services:
Complete line of fire protection products
Market Area:
U.S., Canada, Latin America, Europe, Asia
Hours of Operation:
7:00 a.m.-5:00 p.m., Mon.-Fri.
Sales Contact:
Deborah Smith, Fire Protection Sales Assistant
Telephone:
708.885.3074
FAX:
708.534.5441
Management:
Thomas E. Fish, President
Dean Taylor, V.P., Sales & Marketing
John Smayda, Eastern U.S. Fire Protection Director
Brian Reef, Western U.S. Fire Protection Director
Sales Contact:
Deborah Smith, Fire Protection Sales Assistant
Tim Hamelin, Regional Inside Sales Manager
Telephone:
708.534.1414
FAX:
708.534.5441
Company Profile:
AnvilStar™ offers a complete line of products for the fire protection industry including Gruvlok® couplings, fittings, flanges and valves: roll groovers, steel pipe nipples and couplings, cast

and malleable iron threaded and flanged fittings, pipe hangers and supports, Merit® teelets, drop nipples and steel welding flanges. SPF™ grooved couplings, fittings and flanges, SPF™ cast iron and ductile iron threaded fittings, O'lets, steel pipe nipples and Mueller valves and indicator posts.

APEX Pumping Equipment, Inc.
720 Heartland Drive, Unit P
Sugar Grove, Illinois 60554
Toll Free: 866.563.2739
FAX: 866.950.2739

Founded:
1996
Primary Products/Services:
ITT A-C Fire Pumps & Controllers, Residential FP, Tanks, ARGCO Products
Market Area:
Illinois, Indiana, Iowa, Minnesota, Nebraska, with branches in the Quad Cities, Cedar Rapids
Hours of Operation:
8:00 a.m.-5:00 p.m.
w/ 24 hr. service
Management:
Brad Clemmons, President
Vince Rodriquez, Service Manager
Bruce Jacobson, Sales Manager
Steve Holzkopf, Office Manager
Sales Contact:
Steve Holkopf, Office Manager
Company Profile:
For over 12 years, APEX has been providing fire and industrial pumping equipment system sales, service and testing. With over 100 years of combined knowledge and experience working complex, highly engineered pump house packaged systems that require full understanding of fire and special hazard. Combined with above ground tank sales and installation, APEX takes great pride in "Supplying Solutions" for all of their customers' projects and applications. There is not a project too large or too small for our team. We thrive on complexity and we welcome simplicity all the way down to the ARGCO products for which we are the Midwest Master Distributor.

Apollo Valves/Conbraco Industries
PO Box 247
Matthews, North Carolina 28106
Telephone: 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:
Pete Chapman, General Manager, Backflow Prevention
Cal Mosack, Executive Vice President, Sales & Marketing
John Wells, Inside Sales Manager
Sean Perry, Western Regional Sales Manager
Sales Contact:
Pete Chapman, Gen. Mgr., Backflow Prevention
Telephone:
704.841.6066
Company Profile:
Apollo Valves/Conbraco Industries is a third generation, family –owned company. Employing 1,200 people to manufacture and market MADE IN AMERICA valve products. Featuring UL/FM Backflow Preventers, UL Ball Valves, pressure regulations and relief controls. Introducing the new DC 4SG Double Check assembly and DCDA 4SG Double Check Detector assembly in 2 ?"-8" sizes, featuring short lay length, 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.

ARGCO
2610 Commerce Way
Vista, California 92081
Telephone: 760.727.1644
Toll-Free: 800.854.1015
FAX: 760.727.3270
Internet:
www.argco.com

Founded:
1981
Primary Products/Services:
Fire Sprinklers, Piping Tools, Hangers & Fasteners
Market Area:
United States
Hours of Operation:
6:00 a.m.-4:00 p.m. PST, Mon.-Fri.
Management:
Tom Tallman, General Manager
Lawrence Kent, Sales
Buck Eilers, Sales
Woody Witwer, Sales
Sales Contact:
Tom Tallman, Gen. Mgr.
Telephone:
800.854.1015
FAX:
760.727.3270
Company Profile:
Since 1981, ARGCO has been supplying the fire sprinkler industry. Starting with hard-to-find escutcheons and wall plates, ARGCO has expanded its line extensively. Top selling pipe thread sealants, a full line of hangers and fasteners and ARGCO's own brand of "PT" piping tools. ARGCO is introducing its new improved website in the summer of 2008.

ASCO Power Technologies – Firetrol Products
5625 Dillard Drive
Cary, North Carolina 27518
Telephone: 919.460.5200
FAX: 919.460.5250

Management:
Matthew Rodgers, Vice President-Firetrol Products
Kevin Shaw, Eastern Sales Manager
William King, Western Sales Manager
Carol Brady, Customer Service Manager
Sales Contact:
Carol Brady
Telephone:
919.460.5208
FAX:
919.460.5250
Company Profile:
For over 35 years, the Firetrol name has been recognized as a leader in fire pump controller innovation, design, quality and manufacturing.

Atlantic American

Fire Equipment Company
121 Titus Avenue
Warrington, Pennsylvania 18976
Telephone: 215.491.9800
Toll-Free: 800.247.1128
FAX: 215.491.7395
Internet: www.atlanticamerican.com

Founded:
1985
Primary Products/Services:
Fire Protection Products
Market Area:
Maine to North Carolina
Hours of Operation:
7:00 a.m. - 5:00 p.m., Mon.-Fri.
Management:
Paul DeCamara, Sr. President
Patrick Roche, Vice President
Robert MacGeorge, V.P., Operations
John Beck, Steel Pipe Division Manager
Sales Contact:
Bill Devlin, Sales Manager
Company Profile:
Atlantic American Fire Equipment Company is a leading wholesale material supplier to the fire protection industry. We provide top quality products at very competitive prices to commercial and residential fire sprinkler contractors throughout the Mid-Atlantic and Northeast regions of the U.S. The company was founded by Paul DeCamera and Patrick Roche in 1985, based on a vision of providing quality products and service to our customers. Since then, we have grown by adding five warehouses strategically located throughout a 13-state region, allowing us to take our service to an even higher level. Our plans include adding more warehouses to support the demand for our products and services. We insist upon well-stocked inventories resulting in excellent fill rates, making us your one stop shop for the best sprinkler system components available on the market today.

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

Aurora Pump/Pentair Water

800 Airport Road
North Aurora, Illinois 60542
Telephone: 630 859-7000
FAX: 630 859-7060
Internet: www.aurorapump.com

Founded:
1919
Primary Products/Services:
Fire Pumps/Systems
Hours of Operation:
Monday-Friday
Management:
David Goddard, V.P. Sales & Marketing
Dina Brown, Marketing Services Manager
Company Profile:
Pentair Water North Aurora Operations offers a complete line of fire pumps to meet your fire protection needs; Vertical Inline, Horizontal Split-Case, Vertical Turbine, Foam and Mist Pumps. Aurora Pump™, Fairbanks Morse™ and Edwards™ are the product lines that are manufactured and sold at the Pentair Water North Aurora Operations plant. Offering both electric and diesel drives, we can also supply complete packaged systems to custom fit your requirements.

BAVCO BACKFLOW APPARATUS & VALVE CO.

BAVCO

BAVCO
20435 South Susana Road
Long Beach, California 90810
Telephone: 310.639.5231
Toll Free: 800.458.3492
Internet: www. bavco.com
Founded:
1977
Primary Products/Services:
Backflow Prevention Equipment
Market Area:
North America
Hours of Operation:
7:30 a.m.-4:00 p.m. PST, Mon.-Fri.
Management:
Jim Purzycki, Manager
Sales Contact:
Jim Purzycki
Telephone:
800.458.3492
FAX:
310.639.0721
Company Profile:
BAVCO is a master parts distributor specializing in Backflow Prevention Equipment. We sell original factory repair parts for all makes, models and sizes. We guarantee every part for every assembly is in stock and ready for our same day shipping policy. We stock parts for older, as well as newer models. We can be reached at 800.458.3492 or visit us at www.bavco.com.

BlazeMaster®

Fire Sprinkler Systems
9911 Brecksville Road
Cleveland, Ohio 44141
Telephone: 216.447.5000
Toll-Free: 888.234.2436
FAX: 216.447.5750
Internet: www.blazemaster.com

Founded:
1984
Primary Products/Services:
BlazeMaster® pipe and fittings
Management:
Rocco Mango, Business Director
Gary L. Johnson, Global Business Development Manager
Matthew Kuwatch, Global Marketing Manager
Jeff Gibson, Technical Manager
Barry Just, Market Development Manager
Sales Contact:
Sales Department
Telephone:
888.234.2436
FAX:
216.447.5750
Company Profile:
BlazeMaster® CPVC Fire Sprinkler Systems have a proven history of performance as a cost effective alternative to metal piping systems featuring fast, easy installations, superior corrosion resistance and low flame and smoke characteristics. Since the product was introduced in 1984, more than one billion feet of BlazeMaster® pipe have been installed in more than 40 countries, making it the most specified non-metallic fire sprinkler system in the world. BlazeMaster® pipe and fittings are accepted for use in all three major model codes and meet National Fire Protection Association NFPA 13, 13D and 13R sprinkler standards.

Bodine Assembly & Test Systems
317 Mt. Grove Street
Bridgeport, Connecticut 06605
Telephone 203.334.3100
FAX: 203.330.8716

Primary Products/Services:
Automated Assembly Technology

Brooks Equipment Company, Inc.
P.O. Box 481888
Charlotte, North Carolina 28262
Telephone: 800.826.3473
FAX: 800.433.9265
Internet: www.brooksequipment.com

Founded:
1941
Primary Products/Services:
Fire and Life Safety Equipment
Market Area:
National
Hours of Operation:
7:00 a.m. - 8:00 p.m. EST Mon.-Fri.
Management:
Tim Foughty, President
Eric Smith, CEO
Rick Fairclough, CEO
Sales Contact:
Carol Seagle, Marketing Coordinator
704.916.3438
Company Profile:
For 65 years, Brooks Equipment has been a leader in the industrial fire safety market, offering over 6100 top quality products from more than 600 of the industries finest manufacturers. With our nationwide network of distribution centers, knowledgeable sales staff, and training programs, we are committed to providing you with the tools you need to grow your business. At Brooks, you'll not only come to rely on great customer service, but will also receive technical and procurement support, fast delivery, and information at your fingertips. Plus, you'll experience true loyalty, real quality control, and life-saving technology. We work hard for you, and will continue to earn our place as Your First Choice for Fire Equipment.

Buckeye Fire Equipment Company
1170 West Corporate Drive
Suite 201
Arlington, Texas 76006
Telephone: 817.633.3626
Toll-Free: 877.391.3626
FAX: 817.633.5884
Internet: www.buckeyef.com/fire

Founded:
1967
Primary Products/Services:
Fire Protection Equipment
Market Area:
Worldwide
Hours of Operation:
8:00 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Robert Taylor, System Sales Engineer
Jim Devonshire, Manager, Foam Business Development
Company Profile:
Buckeye Fire Equipment Company has a full range of fire fighting foam concentrates, hardware, proportioning and delivery systems to the sprinkler industry. We have a full line of AFFF aqueous film forming foam concentrates, along with high expansion and protein based concentrates for specific applications. Each of these products are considered "Earth-Friendly" and do not require reporting to the EPA in the event of a discharge. Our hardware line includes bladder tanks, ratio controllers, monitors, balanced pressure proportioning systems with foam concentrate pumps, I.L.B.P. modules, foam chambers and foam makers. We offer design assistance in accordance with the appropriate NFPA codes and standards and a Foam Agent and Systems Application Guide is available in Hard Cover and CD-ROM versions, free of charge. Please contact us for additional information.

Cameron Sales Company
12303 Wormer
Redford, Michigan 48289
Telephone: 313.537.0044
FAX: 313.537.8082
Internet: www.cameronsales.com

Founded:
1980
Primary Products/Service:
Fire Protection Products
Hours of Operation:
7:30 a.m.-5:00 p.m.
Market Area:
Michigan
Management:
Jack Cameron, President
Sales Contact:
Jeff Cameron
Company Profile:
Cameron Sales has been a leader in the fire protection industry for over two decades, representing the finest manufacturers in the piping and fire protection industry. Located in metro Detroit, Cameron Sales is able to provide quality and dependable products with service that is second to none.

CECA Adjustable Drop Nipples
1920 North Redmond Road
Jacksonville, Arkansas 72076
Telephone: 501.982.9463
FAX: 501.982.9676
Primary Products/Services:
Adjustable Drop Nipples

Central Sprinkler Company
451 North Cannon Avenue
Lansdale, Pennsylvania 19446
Telephone: 215.362.0700
Toll-Free: 800.523.6512
FAX: 215.362.5385
Internet: www.centralsprinkler.com

Founded:
1973
Primary Products/Services:
Fire Sprinklers, Fire Protection Valves & Devices, Grooved Fittings & Couplings, CPVC Pipe & Fittings
Market Area:
Worldwide
Management:
Carmine Schiavone

Charlotte Pipe and Foundry Co.
3425 Standwood Boulevard
Huntsville, Alabama 35811
Telephone: 205. 859.1600
FAX: 256.272.2782
Internet: www.charlottepipe.com

Primary Products/Services:
Cast Iron, PVC,
ABS, and CPVC pipe and fittings for plumbing and industrial systems
Management:
Kirk Thompson, President

Chemguard, Inc.

204 South 6th Avenue
Mansfield, Texas 76063
Telephone: 817.473.9964
Toll Free: 800.222.3710
FAX: 817.473.0606

Founded:
1987

Primary Products/Services:
Manufacturer of fire suppression foam concentrates and fire suppression systems.

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

Management:
Roger Bower, President
Twana Connors, Senior Vice President
John Vieweger, VP, Sales and Marketing

Sales Contact:
John Vieweger, VP Sales & Marketing

Telephone:
817.473.9964

FAX:
817.473.0606

Company Profile:
ISO 9001:2000 certified, Chemguard manufactures UL and FM approved fire–suppression foam concentrates, fire-fighting hardware and engineered foam systems for industrial, military, municipal, offshore, petrochemical/energy, transportation/freight and aircraft hangar applications around the world. Our extensive line of high-quality, durable and field-proven fire-fighting hardware includes fixed systems, self-contained foam units and large dry chemical skid units. We custom engineered trailer- and skid-mounted foam systems, self-contained foam units and large dry chemical skid units. We utilize global blending facilities to ship orders quickly-including emergency foam concentrate requests. Customer support includes laboratory analysis, live fire testing, technical application and design assistance and custom training on or off site

Chicago Backflow Prevention Systems, Inc. CBI

12607 S. Laramie Avenue
Alsip, Illinois 60803
Telephone: 708.389.5600
Toll Free: 866.BACKFLOW
FAX: 708.389.5632
Internet: www.backflow.com

Founded:
1993

Primary Products/Services:
Backflow testing, valve specialists, consulting

Market Area:
Licensed to test in AR, AL, IL, IN, IA, LA, MN, MI, SC and WI.

Hours of Operation:
8:00 a.m. - 4:30 p.m. Mon.-Fri.-24 hour emergency service

Management:
Donald J. Smith, President
Michael D. Eisenhower, Executive Vice President
Brett Scharpenter, VP Sales & Marketing
Katie Rager, Customer Service Manager

Sales Contact:
Katie Rager, Customer Service Manager Testing Group
Brad Stancampiano, Director of Administration BSI/Consulting Group

Telephone:
BSI Group 800.414.4880

FAX:
BSI Group 866.414.4990

Company Profile:
Comprehensive programs that include testing, maintenance, replacement and troubleshooting of backflow assemblies. CBI's emphasis focuses on the fire protection, medical, commercial, manufacturing, chemical and power industries. Staff capabilities include mechanical engineering, NICET IV for fire protection, CCCDI licensed plumbers. CBI's consulting group, Backflow Solutions In., develops and manages turnkey cross-connection control programs that encompass ordinance development, stake holder education, inspections, remediation consultation and data management, which are mandated by the U.S. EPA and state environmental agencies.

CB Marketing, Inc., a Division of Chicago Backflow, Inc.

12559 South Laramie Avenue
Alsip, Illinois 60803
Telephone: 708.202.0033
FAX: 708.385.5415
Internet: www.backflow.com
click on the CB Marketing button

Primary Products/Services:
Representation, sales and service of backflow assemblies, fire pumps, fire pump controls, water storage tanks and select specialty products.

Market Area:
Northwest Illinois, Indiana, Wisconsin

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

Management:
Brett Scharpenter, Vice President Sales & Marketing
Doug Eisenhower, Product Manager Pump Systems
Barb Jonas, Product Manager Backflow Products/Distribution

Sales Contact:
Doug Eisenhower, pump products
Barb Jonas, backflow products

Telephone:
708.202.0033

FAX:
708.385.5415

Company Profile:
Key product lines and partners include backflow assemblies by Ames Fire & Water, stationary fire pumps or ready built pump houses by Patterson Fire Pumps, fire pump motor controls, variable speed motor controls by Master Controls and water storage tanks including structural design and erection by Aqua Store. CB Marketing services the products we sell including electrical equipment. Our partners are distinctly recognized as industry leaders in their respective manufacturing fields and provide quality products that meet the highest industry standards. CB Marketing can effectively introduce products via multiple market channels. We specialize in new product introductions and recapturing lost market share for our principals.

Clarke Fire Protection Products, Inc.
3133 East Kemper Road
Cincinnati, Ohio 45241
Telephone: 513.771.2200
FAX: 513.771.0726
Internet: www.clarkefire.com

Founded:
1964
Primary Products/Services:
Diesel engines for stationary sprinkler fire pumps.
Market Area:
North America, South America, Europe, Asia, Middle East
Hours of Operation:
8:00 a.m. - 5:30 p.m. Mon.-Fri.
Management:
Dane Petrie, President
Mark Evans, Global Marketing Manager
Justin Strousse, Sales Manager, Americas
Dave Scholten, Customer Service Manager
Sales Contact:
Justin Strousse, Marketing Manager, Americas
Telephone:
513.719.2307
Company Profile:
Clarke manufactures diesel engines to NFPA-20 specifications that are certified under UL and FM, ranging in power from 41hp to 575hp. Clarke's Pressure Limiting Driver limits system pressure to prevent over-pressurization of building sprinkler systems during the weekly test. Introduced in 2007, Clarke provides UL listed couplings for electric motor driven fire pumps and in 2008 will introduce UL listed drive shafts for diesel driven fire pumps.

Columbian TecTank
5400 Kansas Avenue
Kansas City, Kansas
Telephone: 913.621.3700
FAX: 913-621-2145
Internet: www.columbiantectank.com

Primary Products/Services:
Manufacturer of bolted tanks and shop-welded tanks in coated carbon steel, aluminum and stainless steel.

Complete Pump Service Co., Inc.
461 South Irmen Drive
Addison, Illinois 60101
Telephone: 630.628.1600
FAX: 630.628.1709
Internet: 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, Persident
Telephone:
630.628.1600 ext. 107
FAX:
630.628.1709
Company Profile:
Complete Pump Service Company offers 24 hour 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.

Croker Division

Fire–End and Croker Corporation
7 Westchester Plaza
Elmsford, New York 10523
Telephone: 914.592.3640
Toll Free: 800.729.3473
FAX: 914.592.3892
Internet: www.croker.com

Founded:
1911
Primary Products/Services:
Fire protection equipment
Market Area:
Nationwide/Worldwide
Hours of Operation:
8:30 a.m.-4:30 p.m.
Management:
Paul A. Sposato, President
Larry J. Kaplan, VP Sales
Sales Contact:
Larry J. Kaplan, VP Sales
Company Profile:
Since 1911, Croker has manufactured and supplied the highest quality Fire Hose Standpipe Equipment available in the industry. As we approach our 100 year anniversary, 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 located in Elmsford, New York. We maintain inventory in Dallas, Texas, Detroit, Michigan, Plantation, Florida, Cleveland, Ohio, Louisville, Kentucky, Ashland, Virginia and Wilmington, Delaware. Because our equipment is critical for the protection of lives and property, we are continually striving to maintain and improve our product quality year after year. This has been our mission since 1911.

Branch Office and Regional Warehouse:
CORKER DIVISION-FIRE-END
& CROKER CORP.
1110 South Airport Circle-Suite 110
Euless, Texas 76040
Telephone:
817.354.9900
Toll Free:
877.354.9905
FAX:
817.545.0055
Max Lombard, Regional Sales Manager
Jake Lombard, Warehouse Manager

DecoShield Systems II, Inc.

272 Southwest 12th Avenue
Deerfield Beach, Florida 33442
Telephone: 954.725.7665
Toll-Free: 800.873.0894
FAX: 800.585.3894
Internet: www.decoshield.com

Founded:
1988
Primary Products/Services:
Fire sprinkler cover system
Market Area:
United States, Canada, Europe
Hours of Operation:
8:00 a.m.-6:00 p.m.
Sales Contact:
Linda Camm, President
Telephone:
800.873.0894
FAX:
800.585.3894
Company Profile:
UL/ULC listed DecoShield Systems provide you with lightweight, attractive, affordable modular cover/support systems for sprinkler piping, hydronics, plumbing, cable and conduit. DecoShield products are manufactured using an engineered resin of a Class I/A material meeting most model code requirements, and are clean, paintable, easy to install, tamper-resistant, durable and economical. The DecoShield cover will not dent, crack, rust or corrode. As an alternative to constructed soffits and suspended ceilings, the DecoShield Systems can be installed without disturbing asbestos ceilings and can be easily installed in occupied premises. We also offer assistance with design, installation and anchoring problems.

Dixon Powhatan

800 High Street
Chestertown, Maryland 21620
Telephone: 410.778.2000
Toll Free: 800.355.1991
FAX: 410.778.4702
Internet: www.dixonpowhatan.com

Primary Products/Services:
Fire department connections, valves
Market Area:
U.S., Canada, Mexico, Europe
Hours of Operation:
8:00 a.m.-5:00 p.m. Mon.-Fri.
Management:
Bob Grace, Division Manager
Hazen Arnold, Sales Manager
Robin Bauer, Product Specialist
Craig French, Plant Manager
Sales Contact:
Hazen Arnold, Sales Manager
Telephone: 410.778.2000 ext. 326
FAX: 410.778.4702
Company Profile:
Dixon Powhatan is a manufacturer and distributor of fire protection products. Specializing in brass goods, our Winchester, Virginia manufacturing facility continues the proud tradition of Powhatan; making quality products at a competitive price. We stock our products in 13 warehouses around the country to support our distributors and get products on the job site fast. These products include: Pressure Reducing Factory Set Valves, Angle, Globe Wedge Disc Gate Valves, Chicago Pattern, Nozzles, Adapters, Fire House, Racks, Reels and Fire Department Connections. We proudly carry FM Approval, UL listings and MEA Approvals on numerous products.

Elkhart Brass

1302 West Beardsley Avenue
Elkhart, Indiana 46514
Telephone: 574.295.8330
Toll-Free: 800.346.0250
FAX: 574.293.9914
Internet: www.elkhartbrass.com

Founded:
1902
Primary Products/Services:
Fire Fighting Equipment
Market Area:
United States & International
Hours of Operation:
8:00 a.m.-5:00 p.m. Mon.-Fri.
Management:
Paul Albinger, Director of Sales
Company Profile:
Elkhart Brass is the industry's most experienced manufacturer of firefighting equipment. For more than a cen-

2007
Sway Brace Calculation Program

1500 DRAWINGS
Ss PROTOCOL
INTERPOLATES Cp
PIPE DEFLECTION AUTO CORRECT
CPVC SWAY BRACING
SPECIFIC GRAVITY
PRYING EFFECT

www. AFCON .org

Sway Brace Products and Hangers that Help

9600 Klingerman Street
P.O. Box 3365
South El Monte, CA 91733*USA
Phone: 626.444.0541*Fax: 626.444.3887
www.afcon.org
e-mail:info@afcon.org

Sway Bracing Calculations per 2007 NFPA 13

Project/Contractor Information

Project:	ABC COMPANY
Project Address:	1234 Main Street
Project City/St:	Brea, Cal 93307
Contractor:	AFCON
Contractor Address:	9600 Klingerman Street
Contractor City/St:	South El Monte, CA 91733

Brace Pipe Information

Lenght of Brace:	3 ft 6 in
Diameter of Brace:	1 in
Type of Brace:	Schedule 40
Angle of Brace:	45° to 59°
Least Radius of Gyration:	0.42
L/R Value:	200
Maximum Horizontal Load:	2,500 lb

Fastener Information

☐ NFPA 13 Fastener ■ Listed Adapter

Structural Supporting Member:	Web Beam	
Orientation of connecting surface:	"H"	
Fastener Type:	n/a	(n/a)
Fastener Diamter:		n/a
Fastener Length (under head):		n/a
Maximum Load:		n/a

Seismic Brace Attachments

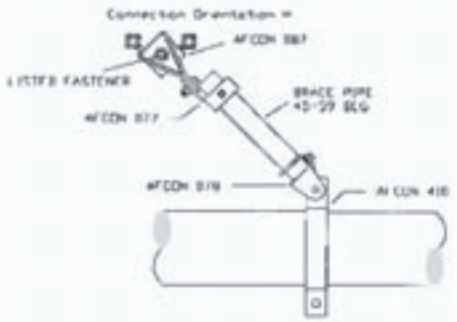
Stucture Attachment Adapter:
087 Adapter Stl Web Joist
Listed load rating: 2,015 lb

Structure Attachment Fitting:
077 Attachment End (Locking)
Listed load rating: 2,015 lb Adj. load rating per 9.3.5.10.3: 1,425 lb

Pipe Connection Attachment:
078 Straight Attachment End Locking
Listed load rating: 2,015 lb Adj. load rating per 9.3.5.10.3: 1,425 lb

Pipe Attachment Fitting:
410 Pipe Clamp (For Sway Bracing)
Listed load rating: 2,015 lb Adj. load rating per 9.3.5.10.3: 1,425 lb

Seismic Brace Assembly Detail



Brace identification no. (to be used on plans): 12

☐ Lateral Brace ■ Longitudinal Brace ☐ 4-Way Brace

Sprinkler System Load Calculation Ss: 1.15 Cp: 0.568 Cp per AHJ:

	Diameter	Type	Length (ft)	Total (ft)	0.568 Weight per ft	0.568 Total Weight
■	4 in	Schedule 10	80 ft	80.0 ft	6.69 lb/ft	615.48 lb
☐	2 in	Schedule 10	15 ft	15.0 ft	2.40 lb/ft	41.40 lb
☐	1-1/2 in	Schedule 10	40 ft	40.0 ft	1.73 lb/ft	79.58 lb
☐	1-1/4 in	Schedule 10	40 ft	40.0 ft	1.43 lb/ft	65.78 lb
☐	1 in	Schedule 10	80 ft	80.0 ft	1.03 lb/ft	94.76 lb
☐						
☐						
☐						
☐						
☐						

Brace Connection Valve/Fitting Factor: 2007 - 1.15 Total 0.568 weight of water-filled pipe 897.00 lb

tury the company has produced innovative firefighting and fire protection products that lead the industry in safety, versatility and performance.

ERICO
34600 Solon Road
Solon, Ohio 44139
Telephone: 440.542.3864
FAX: 440.542.6948

Primary Products/Services:
ERICO is a designer, manufacturer and marketer of precision-engineered specialty metal products

Ferguson Fire & Fabrication, Inc.
2750 S. Towne Avenue
Pomona, California 91766
909.517.3085
FAX: 909.517.3870
Internet: www.fergusonfire.com

Founded:
1989
Primary Products/Services:
Fire Sprinkler Material and Fabrication
Market Area:
Continental United States plus Alaska and Hawaii
Hours of Operation:
7:00 a.m. - 4:30 p.m. Mon.-Fri.
Management:
Lee Klein, President/General Manager
Lou Razza, Area Manager-West coast
Mike Klein, General Manager
J. Johnson, National Sales Manager
Company Profile:
Ferguson Fire and Fabrication supplies the highest quality fire protection products in 30 states from 75 warehouse facilities dedicated to the fire sprinkler contractor. 27 of these facilities also have fabrication capabilities. We continue growing our business and reputation

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

Fire Protection Products, Inc.
6241 Yarrow Drive Suite A
Carlsbad, California 92011-1541
Telephone: 760.931.1168
Toll-Free: 800.344.1822
FAX: 760.931.8080
Internet: www.fppi.com

Founded:
1989
Primary Products/Services:
Fire Sprinkler Accessories
Market Area:
Worldwide
Hours of Operation:
6:30 a.m. - 5:00 p.m. PST Mon.-Fri.
Management:
Randy Greenslate, President
Sales Contact:
Customer Service
Telephone:
800.344.1822
FAX:
760.931.8080
Company Profile:
Fire Protection Products, Inc. FPPI supplies fire sprinkler accessories to manufacturers, distributors and fabricators. The company's focus is on being the premier low-cost provider of fire sprinkler accessory products while maintaining the highest levels of product quality and customer service. FPPI also carries escutcheons, sealants and lubricants, gaskets and gasket kits, hangers & fasteners, valves, hose valves and accessories, miscellaneous brass, fire department connections and accessories and pressure gauges and accessories.

FlexHead Industries, Inc.
56 Lowland Street
Holliston, Massachusetts 01746
Telephone: 508.893.9596
Toll-Free: 800.829.6975
FAX: 508.893.6020
Internet: www.flexhead.com

Primary Products/Services:
FM/UL approved flexible sprinkler connections for fire protection.
Market Area:
Worldwide
Hours of Operation:
8:30 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Norman MacDonald, President
Peter M. MacDonald, Vice President
Sales Contact:
Peter MacDonald, Vice President
Telephone:
508.893.9596
Toll Free:
800.8296975
FAX:
508.893.6020
Company Profile:
Founded in 1992, FlexHead Industries is dedicated to providing safe, leading edge technologies that promote increased installation and maintenance of automatic sprinkler systems. FlexHead manufactures flexible stainless steel hose assemblies that connect sprinkler heads to the branch lines. These systems install in a quarter of the time of hard pipe armovers and sprinkler heads can be easily relocated, inspected and maintained. With no rigid joints between the branch line and the head, the flexible connection is impervious to building motion, even in seismically active areas. It remains completely watertight even under the most rigorous conditions.

Fox Sprinkler Supply Corporation
951 Estes Court
Schaumburg, Illinois 60193
Telephone: 847.524.8250
Toll-Free: 866 Sandfox
FAX: 847.524.8262
Internet: www.foxsprinkler.com
Primary Products/Services:
Fire Protection Supplies
Management:
Scott Sandfox, President

FPE Software, Inc.
P.O. Box 1748
Prince Frederick, Maryland 20678
Telephone: 410.586.2128
Toll-Free: 877.586.2128
FAX: 410.586.2085
Founded:
1988

Primary Products/Services:
Computer Software
Market Area:
United States and International
Hours of Operation:
9:00 a.m. - 6:00 p.m. Mon.-Fri.
Management:
Mark A. Lentocha, P.E., President
Fred Musser, Sales Manager
Company Profile:
FPE Software, Inc. produces PC software designed to fulfill the needs of the fire protection industry. FIRE PUMP EVALUATION PROGRAM 2002 is designed for users who perform fire pump tests and are responsible for recording test results, determining and monitoring the adequacy of a pump & calculating and plotting up to four pump curves on a single graph. "THE" SPRINKLER PROGRAM 2001 is a user friendly sprinkler hydraulics program. Program capabilities include: supply or demand calculations, on-screen results overlay, extensive error checking, user modifiable pipe diameters and fitting equivalent lengths, supply/demand graph output and more. HYDRAULIC HELPER 2008 is a collection of useful hydraulic formulas and utilities such as water supply curve graphing and hydraulic gradients.

Furman Insurance Agency
P.O. Box 1927
Pompano Beach, Florida 33061
Telephone: 954.943.5050
FAX: 954.942.6310

Primary Products/Services:
Commercial Property and Casualty Insurance
Management:
Carlos Chinchilla, CPCU Vice President

General Air Products, Inc.
118 Summit Drive
Exton, Pennsylvania 19341
Telephone: 610.524.8950
Toll Free: 800.345.8207
FAX: 610.524.8965
Internet: www.generalairproducts.com

Founded:
1936
Primary Products/Services:
NFPA 13D Pumping Systems, Air Compressors
Market Area:
Worldwide
Hours of Operation:
8:00 a.m. - 5:00 p.m. EST Mon.-Fri.
Management:
Raymond M. Fremont, Sr., President
Geoff Pridham, Vice President – Engineering
Raymond R. DeCecco, Manager –Customer Service
Sales Contact:
Raymond R. DeCecco, Manager –Customer Service
Company Profile:
General Air Products, Inc. proudly offers our innovative residential fire protection pumping solution for NFPA 13D applications-the RFP System. It's built with the same high level of quality you've come to expect from us. General Air Products, Inc. remains the only company to offer a complete line of air compressors specifically designed for all types of dry pipe sprinkler systems. Visit our website for details about our UL Listed Oil-Less Air Compressors, our FM Approved Dry Air Pac, our UL Listed & FM Approved air maintenance devices, our lubricated base and tank mounted air compressors and more.

Globe Fire Sprinkler Corporation
4077 Air Park Drive
Standish, Michigan 48658
Telephone: 989.846.4583
Toll Free: 800.248.0278
FAX: 989.846.9231
Internet: www.globesprinkler.com

Founded:
1987
Primary Products/Services:
Manufacturers of sprinklers, valves, etc.
Market Area:
Worldwide
Hours of Operation:
7:00 a.m.-5:00 p.m., Mon.-Fri.
Management:
Robert C. Worthington, President
Steven R. Worthington, Executive V.P.
Brian T. Hoening, V.P.-Engineering
John M. Collins, V.P.-Manufacturing
Sales Contact:
Steven R. Worthington, Executive V.P.
Telephone:
989.846.4583
FAX:
989.846.9231
Company Profile:
Globe Fire Sprinkler Corp. is an independent, privately owned company that strives to exceed customer expectations, offering top quality, competitive products and a high level of customer service. Approximately 30% of Globe's net sales are to overseas customers. Globe continues to develop new products as the world market demands and is happy to state that its relationship with various approval authorities, such as Underwriters Laboratories, Inc., FM approvals and the Loss Prevention Certification Board UK is excellent. Globe has the LPCB UK certification for ISO 9000 series Quality Assurance, therefore exhibiting proof of the quality it continuously builds into each of its 100% factory-tested products.

Gripple, Inc.
1611 Emily Lane
Aurora, Illinois 60502
Telephone: 630.406.0600
Toll Free: 866.GRIPPLE
FAX: 630.406.0664
Internet: www.gripple.com

Founded:
1990
Primary Products/Services:
Cable Hangers for M&E Services
Market Area:
U.S.A., Canada, Mexico
Management:
Tim Caton, C.E.O.
Mike Crowder, Vice President
Roger Aisladie, Engineering Manager

Guardian Automatic Sprinkler
555 Brick Church Part Center
Nashville, Tennessee 37207
Telephone: 615.255.8393
Toll Free: 800.251.4208
FAX: 615.259.3271

Founded:
1973
Primary Products/Service:
Fabrication and Sprinkler Supply
Market Area:
Southeastern and Mid-Western U.S.
Hours of Operation:
6:00 a.m.-10 p.m., Mon.-Fri.

Management:
Larry McNamara, President
Tom Galbreath, Sales Manager
Tommy Banasiewicz, Credit Manager

Sales Contact:
Tom Galbreath, Sales Manager
Telephone:
615.838.5560
FAX:
615.859.1372
Company Profile:
Guardian Automatic Sprinkler Company, Inc. was one of the first, and is now one of the few remaining, independent distributors of quality fire sprinkler products, who deal specifically with fire protection contractors. Located in Nashville, Tennessee, and operating since 1973, we bring over three decades of industry experience to the table and attribute our longevity to the strong personal relationships that we have formed with our clients. Now, we are combining our industry experience, customer-driven business model and a focus on continuously improving to innovate ways to best serve fire protection contractors with both fabrication and supply.

Guardian Fire Equipment
3430 NW 38th Street
Miami, Florida 33142
Telephone: 305.633.0361
FAX: 305.638.4632

Primary Products/Services:
Fire Standpipe Equipment
Market Area:
Worldwide
Management:
Richard H. Childress, President
Lisa C. Peterson, Vice President

Guntersville Fabrication
& Sprinkler Company
8305 AL Highway 79 South
P.O. Box 459
Guntersville, Alabama 35976
Telephone: 800.239.4045
FAX: 205.582.2268

Primary Products/Services:
Fire Protection Fabrication & Supply
Management:
Tim Bice, President

Harvel Plastics, Inc.
PO Box 757
300 Keubler Rd.
Easton, Pennsylvania 18044-0757
Telephone: 610.252.7355
FAX: 610.253.4436
Internet: www.harvel.com

Founded:
1964
Primary Products/Services:
Manufacturers of PVC & CPVC Piping Products
Market Area:
National & International
Hours of Operation:
7 days/24 hrs.
Management:
Earl E. Wismer, President, CEO
Patrick M. Foose, VP, Sales & Marketing
Roy Burpee, National Sales Manager, Fire Protection
William P. Weaver, Director, Technical Services
Sales Contact:
Roy Burpee, National Sales Manager, Fire Protection
Telephone: 610.252.7355
FAX: 610.253.4436
Company Profile:
Harvel Plastics, Inc., a high quality manufacturer of thermoplastic piping products since 1964, is a pioneer producer of CPVC Fire Sprinkler Pipe. Many of the first UL tests performed to evaluate CBVC for fire sprinkler service were conducted on pipe manufactured by Havel. Harvel CPVC piping products consistently meet the tough performance requirements for fire service as verified through ongoing UL, FM and LCPR testing. Harvel's steadfast dedication to quality and unmatched manufacturing experience has earned the company the reputation of "The Quality Line."

HD Supply-Fire Protection
3444 McCrory Place, Ste. 200
Orlando, Florida 32803
Telephone: 407.893.9010
FAX: 407.893.7379
Internet:
www.fireprotection.hdsupply.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:
Chuck Reed, Regional VP
Sales Contact:
Chuck Reed, Regional VP
Telephone: 407.893.9010
FAX: 407.893.7379
Company Profile:
HD Supply-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 service our customers with the products they need, when they need it, where they need it. Our fabrication facilities offer take-off and listing services by Nicet certified personnel. Backed by strict quality control procedures, we offer custom fabrication to meet the needs of your next project.

HD Supply-Fire Protection Branch locations:

Phoenix, Arizona
447 W. Watkins St. #1
Phoenix, Arizona 85003
Telephone: 602.256.0050
FAX: 602.256.7117

Union City, California
34151 Zwissig Way
Union City, California 94587
Telephone: 510.441.1650
FAX: 510.441.1620

San Francisco, California
155 De Haro St.
San Francisco, California 94103
Telephone: 415.431.8722
FAX: 415.431.8567

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

Fresno, California
4710 E. Commerce Ave.
Fresno, California 93725
Telephone: 559.441.7171
FAX: 559.441.7175

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

Tampa, Florida
4511 E. Osbourne Ave.
Tampa, Florida 33610
Telephone: 813.620.9058
FAX: 813.626.6912

Orlando, Florida
3333 Old Winter Garden Rd.
Orlando, Florida 32805
Telephone: 407.299.2275
FAX: 407.298.5038

Palm Beach, Florida
1751 L Avenue
Riviera Beach, Florida 33404
Telephone: 561.863.5600
FAX: 561.845.6120

Fort Myers, Florida
8091 Supply Drive
Fort Myers, Florida 33912
Telephone: 239.437.9444
FAX: 239.437.9969

Miami, Florida
10810 NW 92nd Terrace
Ste. 108
Miami, Florida 33178
Telephone: 305.477.2383
FAX: 305.805.4923

Jacksonville, Florida
11310 Distribution Ave. West
Jacksonville, Florida 32256
Telephone: 904.260.4705
FAX: 904.260.4644

Atlanta, Georgia
2157 Tucker Industrial Road
Tucker, Georgia 30084
Telephone: 770.414.1212
FAX: 770.414.1883

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

Indianapolis, Indiana
8615 East 33rd St.
Indianapolis, Indiana 46226
Telephone: 317.898.4879
FAX: 317.898.4868

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

Charlotte, North Carolina
75 Odell School Rd. S
Concord, North Carolina 28027
Telephone: 704.784.4700
FAX: 704.789.9288

Las Vegas, Nevada
4011 W. Oquendo Rd.
Las Vegas, Nevada 89118
Telephone: 702.382.0331
FAX: 702.382.0671

N. Kingstown, Rhode Island
244 Burlingham Ave.
North Kingstown, Rhode Island
02852
Telephone: 401.294.9532
FAX: 401.294.9534

Myrtle Beach, South Carolina
385 French Collins Rd.
Conway, South Carolina 29526
Telephone: 843.347.5950
FAX: 704.789.9288

Memphis, Tennessee
1851 John Paul Dr.
Memphis, Tennessee 38114
Telephone: 901.745.3106
FAX: 901.744.3204

Dallas, Texas
1975 California Crossing
Dallas, Texas 75220
Telephone: 972.830.9370
FAX: 972.830.9385

Houston, Texas
5823 Thomas Rd.
Houston, Texas 77041
Telephone: 713.937.4568
FAX: 713.937.0493

Richmond, Virginia
738 Goodes St.
Richmond, VA 23224
Telephone: 804.232.2003
FAX: 804.232.1255

Seattle, Washington
10013 MLK Jr. Way So.
Seattle, Washington 98178
Telephone: 206.387.4150
FAX: 206.722.9477

Hieter Industries, LLC

12155 Magnolia Ave. Suite 13-A
Riverside, California 92503
Telephone: 800.854.7473
Fax: 800.732.2228
Internet: www.hieterindustries.net

Founded:
2000
Hours of Operation:
7:30 a.m.-4:00 p.m., Mon.-Fri.
Management:
Oscar Hieter, Jr., Owner
Jennifer Orazco, Office Manager
Sales Contact:
Jennifer Orazco, Office Manager
Telephone:
800.854.7473
FAX:
800.738.2228
Company Profile:
Hieter Industries specializes in custom made escutcheons. Finishes come in Polished/Brushed Aluminum, White or Eggshell and Stainless Steel. For further information please visit our website.

HRS Systems, Inc.

4792 LaVista Road
Tucker, Georgia 30084
Telephone: 770.934.8423
FAX: 770.934.7696
Internet: www.hrssystems.com

Primary Products/Services:
Fire Protection Software
Management:
Hal R. Sanders, P.E., President
H. Asa Tuten, Jr., General Manager
Company Profile:
HRS Systems, Inc. presents:
- HASS® for hydraulic analysis of sprinkler systems
- HASS-Estimator for cost estimating
- HASS HOUSE® for residential sprinkler analysis
- COOSA® for C02 system analysis.

All are Windows-Based and available in both English and Metric Units with Spanish text.

Huguenot Laboratories, Inc

101 Riverdale Road
Port Jervis, New York 12771
Telephone: 845.856.6490
Toll Free: 800.228.3793
FAX: 845.858.8821

Founded:
1998
Primary Products/Services:
MIC and corrosion mitigation, laboratory service
Market Area:
Worldwide
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:
Huguenot Laboratories, Inc. offers a MIC Testing Laboratory, test kits, engineered treatment solutions, corrosion monitoring and control services, patented chemical feed systems for portable and permanent applications, metallurgical and deposit analysis, failure analysis, litigation support, engineering and consulting services, environmentally friendly non-hazardous treatment programs including antifreeze-based products.

Hydratec, Inc.

64 Haverhill Road – Route 111
Windham, New Hampshire 03087
Telephone: 603.434.0502
FAX: 603.434.1348
Internet: www.hydracad.com

Founded:
1972
Primary Products/Services:
Design & Software Service
Market Area:
Worldwide
Hours of Operation:
9:00 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Alan Johnston, President
Stephen Downing, General Manager
Paul McKenna, Customer Support Manager
Bill McKenna, Design Manager
Sales Contact:
Art Dover, CAD Development Manager
Company Profile:
Hydratec has been providing quality software and design services for over 35 years. Our complete line of software products, along with accessible and knowledgeable customer service, gives the Hydratec customer 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. These packages can be used separately, or as an integrated set to provide the best possible solution to your 2D and 3D design needs, now and in the future, for any size company and operator experience level.

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

IDOD Systems LLC

13415 East Route 17
Grant Park, Illinois 60940
Telephone: 815. 465.2102
FAX: 815.465.2104
Internet: www.idodsystems.com

Founded:
1993
Primary Products/Services:
Galvanized Sprinkler Pipe
Market Area:
United States
Hours of Operation:
7:00 a.m. - 5:00 p.m. CST Mon.-Fri.
Management:
Theodore Krengel, President, CEO
Curt Brown, Vice President
Sales Contact:
Curt Brown, Vice President
Company Profile:
IDOD Systems, LC is a manufacturer of fully galvanized sprinkler pipe, guaranteed not to chip or flake. With the Approval of FM Global, the IDOD GAL-5 and GAL-7 Sprinkler Pipe pass the ASTM A653 Zinc Adhesion Test from the Strip galvanizing industry. Produced and cut-to-length directly from the pipe mill, the zinc thickness of almost 2.0 ounces/foot exceeds the A-53 requirement. The superior finish virtually eliminates flaking and cracking from roll grooving. Product strengths include: Smooth, large ID for increased flow; Diameter, ovality, and tube straightness are excellent; GAL-5 Approved for welding, roll grooving, and Victaulic® Pressfit™. GAL-7 Approved for welding, roll grooving, and Plain End Fittings.

ITW Buildex

1349 West Bryn Mawr Avenue
Itasca, Illinois 60143
Toll-Free: 800.284.5339
FAX: 630.595.2569
Internet: www.itwbuildex.com

Founded:
1967
Primary Products/Services:
Pipe Hangers and suspended anchoring systems including Sammys, Truss-T Hangers and pipe flashings
Market Area:
National
Hours of Operation:
8:00 a.m. – 4:40 p.m. Mon.-Fri.
Management:
Andrea Basalay, Business Manager, Suspended Anchoring Systems
Ralph Tenuta, Sales Manager, Suspended Anchoring Systems
Sales Contact:
Ralph Tenuta, Sales Manager, Suspended Anchoring Systems
Telephone:
630.787.3263
FAX:
630.595.3569
Company Profile:
ITW Buildex, a division of Illinois Tool Works, has provided fastening solutions to the commercial construction industry since 1967. SAMMYS® and Sidewinders®, patented pipe hanging devices from ITW Buildex, provides direct installation of threaded rod in 22-20 gauge metal deck and 18-16 gauge purlin, eliminating the time and expense of a traditional trapeze. The Truss-T Hanger® for bar joist applications offers a quick and safer alternative to the beam clamp.

KENNEDY VALVE/ Division of McWane, Inc.

1021 E. Water Street
PO Box 931
Elmira, NY 14902
Telephone: 607.734.2211
FAX: 607.734.3288

Founded:
1877
Primary Products/Services:
a variety of valve products that meet AWWA specifications.
Management:
John Chalk, Customer Service Manager

Knox Company

1601 West Deer Valley Road
Phoenix, Arizona 85027
Telephone: 623.687.2300
Toll-Free: 800.55.5669
FAX: 623.687.2299
Internet: www.knoxbox.com

Founded:
1975
Primary Products/Services:
Locking FDC Plugs and Caps
Market Area:
United States
Management:
Tom Bonetto, National Account Manager
Cynthia Jones, Marketing Communications Manager
Company Profile:
The Knox FDC Protection Program is a complete system that provides protection for both the intake and discharge sides of water based fire protection systems. Knox locking FDC products provide protection against thread damage and prevent debris from being lodged into uncovered connections. Locking products are available in a 1½" and 2½" male FDC plug, a 2½" female SecureCap and 4" and 5" StorsLok. Plugs and caps come standard with NH threads. Other thread sizes are available upon request. The Knox™ Key Wrench, controlled by the fire department, secures and operates all locking Knox FDC products. For more information, visit www.knoxbox.com.

Loos and Company, Inc.

901 Industrial Boulevard
Naples, Florida 34104
Telephone: 239.643.5667
Toll-Free: 800.321.5667
FAX: 239.643.4558
Internet: www.earthquakebrace.com

Founded:
1958
Primary Products/Services:
Cable/Cable Hardware
Market Area:
Worldwide

M.E.P. CAD, Inc.

4544 West Russell Road, Suite E
Las Vegas, Nevada 89118
Telephone: 702.380.3200
Toll-Free: 888.239.1345
FAX: 702.380.1275
Internet: www.mepcad.com

Founded:
1997
Primary Products/Services:
Computer Aided Design and Fire Alarm Software
Market Area:
United States, Canada, Australia, United Kingdom, Europe
Management:
Joseph P. Reghetti, President/CEO

Master Control Systems, Inc.
910 North Shore Drive
Lake Bluff, Illinois 60044
Telephone: 847.295.1010
FAX: 847.295.0704

Founded:
1965
Primary Products/Services: Fire Pump Controls for Fire Sprinkler Systems
Management:
William Stelter, President
Company Profile:
Master Control Systems, Inc. manufactures fire pump controllers for fire sprinkler systems. These controllers automatically start the fire pump in the event of a fire. Because they are designed with innovative features that benefit the user and engineered for long term reliability, we call our product line "The Intelligent Choice". All of these controllers meet and exceed the requirements of NFPA 20. They are listed by Underwriters Laboratories and approved by the Factory Mutual System.

Metraflex Company-Fireloop
2323 West Hubbard Street
Chicago, Illinois 60612
Telephone: 312.738.3800
Toll-Free: 800.621.4347
FAX: 312.738.0415
Internet: www.fireloop.info

Founded:
1958
Primary Products/Services:
Fire Protection/HVAC Products
Market Area:
Worldwide
Hours of Operation:
8:30 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Zeke Bochenek, Marketing & Product Manager
Sales Contact:
Zeke Bochenak
Telephone:
312 738.3800
FAX:
312.738.0415
Company Profile:
The Fireloop expansion joint simplifies designing seismic movement into your system. It takes less space and installs faster and easier. It effectively protects critical sprinkler piping systems during seismic events.

Metraflex Company-NeverTrip
2323 West Hubbard Street
Chicago, Illinois 60612
Telephone: 312.738.3800
Toll-Free: 800.621.4347
FAX: 312.738.0415
Internet: www.nevertrip.com

Founded:
1958
Primary Products/Services:
Fire Protection/HVAC Products
Market Area:
Worldwide
Hours of Operation:
8:30 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Zeke Bochenek, Marketing & Product Manager
Sales Contact:
Zeke Bochenak
Telephone:
312 738.3800
FAX:
312.738.0415
Company Profile:
The Metraflex NeverTrip auxiliary drain valve assembly replaces the old drum drip. The NeverTrip valve is a complete, compact valve and collection chamber assembly that prevents accidental system trips, saving thousands of dollars to reset the fire sprinkler system. It conforms to NFPA 13 and is pre-tested and pre-assembled.

Miller Sales, Inc.
340 S. Lombard Rd.
Addison, Illinois 60101
Telephone: 630.458.8816
FAX: 630.458.9015
Internet: miller-sales.com
Founded:
1969
Primary Products/Services:
Wilkins Backflow Preventers, Deco Shield
Market Area:
Northern Illinois, NE Indiana
Hours of Operation:
7:30 a.m.-4:30 p.m., Mon.-Fri.
Management:
Harold Miller, President
Mark Petrosius, Secretary
Brian Baxter, Vice President
Sales Contact:
Harold Miller, President
Company Profile:
Miller Sales, Inc. is a manufacturers' representative for Wilkins Backflow Preventers. Miller warehouses the devices for the fire sprinkler, lawn irrigation and plumbing industries. Miller is the representative for the Deco Shield covering system for CPVC fire sprinkler systems.

Neill Supply Company, Inc.
700 Schuyler Avenue
Lyndhurst, New Jersey 07071
Telephone: 201. 939.1100
Toll-Free: 800.526.6376
FAX: 201.939.6095

Primary Products/Services:
Steel Pipe, Valves, Fittings, Sprinkler Fabrication
Management:
Bernard B. Grobart, President

NIBCO INC.
1516 Middlebury Street
Elkhart, Indiana 46516
Telephone: 574.295.3387
Toll Free: 800 234-0227
FAX: 574.295.3320
Internet: www.nibco.com

Founded:
1904
Primary Products/Services:
Fire Protection Valves and TOLCO Pipe Hangers, Supports and Seismic Bracing
Market Area:
Worldwide
Hours of Operation:
7:30 a.m.-6:00 p.m. EST, Mon.-Fri.
Management:
Jeff Shreiner, Vice President, Sales-Wholesale
Bill Geers, Director of Marketing
Phil Liles, Senior Product Manager, Valves

Sales Contact:
Rick Brown, Sales Manager, NIBCO Fire Protection
George Von Gnatensky, Sales Director, TOLCO Fire Protection

Company Profile:
NIBCO manufactures UL, ULC, FMRC, NYC valves for the fire protection market and its valve package has expanded to include TOLCO™ pipe hangers, supports and seismic bracing products including pipe hangers, supports and seismic bracing. For more information, visit www.nibco.com

The Noble Company

P.O. Box 350
Grand Haven, Michigan 49417
Telephone: 231. 799.8000
Toll-Free: 800.878.5788
FAX: 213.799.8850
Internet: www.noblecompany.com

Founded:
1946

Primary Products/Services:
Non-Toxic Antifreeze for wet fire sprinkler systems

Market Area:
U.S.A.

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

Management:
Drew Longnecker, Division Manager, Engineered Fluids
Debbie K. Kingma, Vice President, Packaged Products

Sales Contact:
Drew Longnecker, Div. Mgr. Engineered Fluids

Telephone:
231.799.8000

FAX:
231.779.8850

Company Profile:
Noble Company produces FireFighter™ Freeze Protection Fluids to protect wet fire sprinkler systems. FireFighter™ is available in ready-to-use or concentrated formulations, and is packaged in convenient five-gallon pails, 55-gallon drums, totes and tank trucks. Custom blends and packaging are also available. FireFighter™ is produced in Propylene Glycol PG and Glycerin GL formulations. FireFighter™ GL is the only approved antifreeze for BlazeMaster® CPVC fire sprinkler pipe. FireFighter™ PG is suitable for most other types of wet systems. Noble Company also markets the instruments necessary to test the fluids and chemicals required to maintain the protection. For more information about any other Noble Company product, visit www.noblecompany.com or call 800.878.5788.

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

North Alabama Pipe Corporation

P.O. Box 750
Guntersville, Alabama 35976
Telephone: 256.582.8800
Toll Free: 800. 826.2533
FAX: 256.582.0233
Internet: www.nalapipe.com

Founded:
1982

Primary Products/Services:
Welding Outlets & Pipe Fabrication Equipment

Market Area:
International
Management:
Edward H. Hayes, President
Company Profile:
North Alabama Pipe has carved a niche in the world of the Fire Sprinkler Fabricator by supplying the very best quality NAP 300 welding outlets at affordable prices. We are concentrating our design efforts on machines and other aids that are geared to the needs of the fire protection industry. NAP is willing to adapt our products to your needs. NAP is constantly striving to make the work of the Fire Protection Fabricator easier, faster and more economical. We presently have in production several machines including the Universal Welder, Big Cut and Quick Cut Systems, the Hole System, and the Lift and Turn.

PAC Pump & Systems, Inc.

170 Lodi Street
Hackensack, New Jersey 07601
Telephone: 201.621.0500
FAX: 201.621.0506
Internet: www.pacpump.com

Founded:
2003
Primary Products/Services:
Aurora fire pumps, Joslyn Clark fire pump controllers sales and service.
Market Area:
New Jersey, Albany, New York
Hours of Operation:
7:00 a.m. - 6:00 p.m. Mon.-Sat.
Management:
William Casey, President
Eileen Latona, Inside Sales
Craig Pastore, Sales
Sales Contact:
William Casey
Company Profile:
Sales and service for Aurora fire pumps and Joslyn Clark fire pump controllers, service on all manufacturers of pumps and controllers.

PHD Manufacturing, Inc.

44018 Columbiana-Waterford Rd.
Columbiana, Ohio 44408
Telephone: 330.482.9256
Toll Free: 800.321.2736
FAX: 330.482.2763
Internet: www.phd-mfg.com

Founded:
1972
Primary Products/Services:
Pipe hangers, beam supports, struts & accessories
Market Area:
U.S., Europe, Asia
Hours of Operation:
8:00 a.m.-5:00 p.m., Mon.-Fri.
Management:
Joe Corvino, President
Dave Neal, National Sales Manager
Rick Persing, Nat'l Sales Manager-Sprinkler Division
Sales Contact:
Rick Persing, Nat'l Sales Manager, Sprinkler Division
Telephone & FAX:
514.536.3857
Company Profile:
An industry leader in the pipe hanger supports and strut markets. PHD has successfully built a reputation of quality, customer service and dependable deliveries. Our expansive product lines, including seismic and CPVC, is well-suited to meet the needs of the Fire Protection Industry, We are excited to meet the challenges and build the same success in this expanding market place.

Pipe Fabricators

8580 Valley Forge Lane N
Maple Grove, Minnesota 55369
Telephone: 763.488.8100
Toll-Free: 866. 747.7473
FAX: 763.488.8140
Internet: 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:
5:00 a.m.-10:00 p.m. Mon.-Fri.
Sales Contact:
Jerry Fritz, General Manager
Telephone:
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.

Pipe Products, Inc.

5122 Rialto Road
West Chester, Ohio 45069
Telephone: 513 8608-5900
FAX: 513 881-7844

Primary Products/Services:
Sprinkler Fabricator
Management:
Steve Tino, President

Plumbers Supply Company

1000 E. Main St.
Louisville, Kentucky 40206
Telephone: 502.540.0223
Toll Free: 800.626.5133
FAX: 502.540.0330
Internet: www.plumbers-supply-co.com

Founded:
1928
Primary Products/Service:
Plumbing, Hydronics, HVAC, Fire Protection
Market Area:
Kentucky, Tennessee and surrounding areas
Hours of Operation:
6:30 a.m.-6:30 p.m.,
Mon.-Fri., 7:00 a.m.-12:30 p.m., Sat.
Management:
John J. Werst, III, C.E.O.
Bruce P. Madison, President
Jay B. Johnson, Vice-President
Samuel Sam S. Alvey, General Manager, Fire Protection
Sales Contact:
Sam Alvey, General Manager, Fire Protection
Telephone:
502.540.0223
Cell:
502.550.2053
FAX:
502.540.0330
Company Profile:
Founded in 1928 by John Werst, Sr., Plumbers Supply Company has evolved from plumbing and tools to mill, hydronics, HVAC and fire protection. We supply customers in Kentucky, Indiana, Tennessee and some areas of Ohio, West Virginia

and Illinois. We have branches in Louisville, Lexington and Bowling Green, Kentucky as well as Evansville and Indianapolis in Indiana. We also have satellite branches in Kentucky and Indiana. We stock and sell both overhead and underground in most larger branches.

Polymer Molding, Inc.

1655 West 20th Street
Erie, Pennsylvania 16502
Telephone: 814.455.8085
Toll-Free: 800.344.7584
FAX: 888.257.5566
Internet: 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:
Jeff Hindman, Vice President Sales & Marketing

POTTER
The Symbol of Protection

Potter Electric Signal Company

2081 Craig Road
St. Louis, Missouri 63146
Telephone: 314.878.4321
Toll-Free: 800.325.3936
FAX: 800.768.8377
Internet: www.pottersignal.com

Founded:
1898
Primary Products/Services:
Fire Sprinkler Monitoring, Signaling Devices
Market Area:
Worldwide
Hours of Operation:
8:00 a.m. - 5:00 p.m. CST Mon.-Fri.
Management:
Bernard Lears, President, C.E.O.
Bruce LaRue, Executive Vice-President, Fire Sprinkler/Industrial Division
Sean Heskett, Executive Vice-President, Fire Sprinkler Monitoring/Signaling Devices
Sales Contact:
Tim Freiner, National Accounts Manager
Company Profile:
Established in 1898, Potter Electric Signal Company produces a wide array of products, including fire sprinkler monitoring systems, electronic fire systems, vault and safe security systems, boiler/chiller and industrial control monitoring 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 with unequaled service and technical support. Every employee at Potter is committed to providing you, the customer, the peace of mind in knowing that when you purchase our products, you are providing your customers the very best product 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: 888.404.7960
Internet: 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.

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

Quimby Equipment Company, Inc.

35 Central Drive
Farmingdale, NY 11735
Telephone: 631.454.8411
FAX: 631.454.8423
Internet: www.quimbyinc.com

Primary Products/Services:
Pump Sales
Management:
Greg Ross, Sales Representative

REHAU Incorporated

1501 Edwards Ferry Road,
Leesburg, Virginia 20176
Telephone: 703.777.5255
FAX: 703.777.3053
Internet: www.rehau.com
Founded:
1948
Primary Products/Services:
Fire Protection Fittings & Pexa Pipes
Market Area:
U.S., Canada, Mexico, Central America
Hours of Operation:
8:00 a.m.-5:30 p.m., Mon.-Fri. EST
Management:
Bill Johansen, Business Unit Manager,
Michael Cabral, Sales Coordinator, Fire Protection
Eric Caimal, Marketing Coordinator, Fire Protection
Sales Contact:
Mike Cabral, Sales Coordinator, Fire Protection
Telephone:
314.412.1800
Company Profile:
A leading supplier of polymer-based solutions to construction, Rehau addresses sustainable design priorities by engineering products that enhance comfort and convenience, reduce energy costs, create healthy and safe environments and conserve finite resources. Rehau's products and systems for heating, plumbing and fire protection complement each other in integrated high-performance solutions.

Branches:
REHAU Industries, Inc.
327 Murray Road
Little Shemogue, New Brunswick
E4M 3P3
Tel: 506.538.2346 #014
800.565.7342
Direct Dial Tel: 506.538.2818 #013
Fax: 506.538.7458

REHAU Incorporated *(continued)*

ST. JOHN'S
13 Sagona Avenue
Donovan's Industrial Park
Mt. Pearl, Newfoundland A1 N 4P8
Tel: 709.747.3909 #012
800.205.1991
Fax: 709.368.6248

SIO TORONTO
11 49 Pioneer Road
Burlington, Ontario L7M 1 K5
Tel: 905.335.3284 800.561.9609
Direct Dial Tel: 9053.335.4533 #001
Fax: 905.335.1112

SIO WINNIPEG
11 Plymouth St., Unit 100
Winnipeg, Manitoba R2X 2V5
Tel: 204.697.2028 #004 Fax:
204.697.2091

SIO MONTREAL
3440 Griffith
Ville St. Laurent, Quebec H4T 1A7
Tel: 514.905.0345 #009
800.361.0830
Fax: 514.905.0490

SIO VANCOUVER
REHAU Industries Inc.
26620, 561h Avenue Unit # 102
Langley, BC V4W 3x5
Tel: 604.626.4666 #002
800.668.1173
Fax: 604.626.4667

ALBERTA
5328 Calgary Trail, Suite 1337
Edmonton, Alberta T6H 4J8
Cell: 780. 982.2237 #023 Fax:
780.468.3409
REHAU employees please use the
direct dial line
REHAU S.A. de C.V.
Blvd. A. Lopez Mateos No 932
Celaya, Gto. C.P. 38060
Tel: 461.618.8000 #090
Fax: 461.6 18. 8004

SIO MONTERREY
REHAU S.A. DE C.V.
Av. Circuito Industrial Humberto Lobo
No. 9313
Parque Industrial Mitras, Garcia N.L.
C.P. 66000
Tel: 81.81 21 0130 #081 Fax: 81. 81
21 0150

CHICAGO chic
REHAU Inc.
901 S. Route 53, Suite H
Addison, IL 60101
Tel: 630.317.3500 800.457.3428
Direct Dial: 630.317-3505 #006
Fax: 630.317.3550

SIO MINNEAPOLIS
Rehau Inc.
7710 Brooklyn Blvd., Suite #207
Brooklyn Park, MN 55443
Tel: 763.585.380 #005
800.297.6371
Fax: 763.585.9180

SIO GRAND RAPIDS
REHAU Inc.
625 en moor: Suite 105
Grand Rapids, MI 49546
Tel: 616.285.6867 866.734.2869
Direct Dial: 616.285.5823 #006 Fax:
616.285.7622

SIO LOS ANGELES
REHAU Incorporated
4254 Green River Road
Corona, CA 92880-1669
Tel: 951.549.9017 #011
800.944.1011
Fax: 951.549.9018
Fax: 925 454-8996

S/O GREENSBORO
REHAU Inc.
Hickory Building
3 Centerview Drive, Suite 250
Greensboro, NC 27407-3725
Tel: 336.852.2023 #008
800.947.3428
Fax: 336 855-381 5

Reliable®
TECHNOLOGY • QUALITY • SERVICE

The Reliable Automatic Sprinkler Company, Inc.

103 Fairview Park Drive
Elmsford, New York 10523
Telephone: 914.829.2042
Toll-Free: 800.431.1588
FAX: 800.848.6051
Internet: www.reliablesprinkler.com

Email: info@reliablesprinkler.com

Founded:
1918

Primary Products/Services:
Fire Sprinkler, Valves, Special Hazard/Systems and Fire Sprinkler System Components

Market Area:
Worldwide

Hours of Operation:
7:30 a.m. - 5:30 p.m. EST Mon.-Fri.

Management:
Frank J. Fee, III, President
Kevin T. Fee, Executive Vice President
Michael R. Fee, Vice President, Marketing & Sales Operations

Company Profile:
As a major manufacturer of automatic fire sprinklers, valves and special hazards/systems products and a distributor of sprinkler system components, The Reliable Automatic Sprinkler Company, Inc. is your one source for all your fire protection needs. Headquartered in Elmsford, New York, the company has built a new state-of-the-art manufacturing facility in Liberty, South Carolina and has offices strategically located throughout the U.S. and overseas. Reliable is dedicated to developing new innovative products. Go to www.reliablesprinkler.com to learn more.

Corporate Office:
103 Fairview Park Drive
Elmsford, NY 10523
Tel.: 800.821.2138
www.reliablesprinkler.com

Corporate Manufacturing Facility:
1470 Smith Grove Road
Liberty, SC 29657
Tel.: 864.843.1700

Regional Distribution Centers & Sales Offices:

NORTHEAST REGION:
New York, NY Elmsford
Tel.: 800.431.1588
Fax: 800.848.6051

MID-ATLANTIC REGION:
Washington, DC Lorton, VA
Tel.: 877.883.8831
Fax: 877.851.1553

SOUTHEAST REGION:
Atlanta, GA Norcross
Tel.: 800.652.1819
Fax: 800.848.6052

Orlando, FL Longwood
Tel.: 800.801.3097
Fax: 800.862.0934

MIDWEST REGION:
Chicago, IL Hanover Park
Tel.: 800.228.6274
Fax: 800.848.6053

Minneapolis, MN Roseville
Tel.: 877.827.2816
Fax: 877.827.3043

SOUTHWEST REGION:
Dallas, TX Carrollton
Tel.: 800.442.6742
Fax: 800.848.6054

Denver, CO
Tel.: 877.440.2598
Fax: 877.205.7230

WEST COAST REGION:
Los Angeles, CA Brea
Tel.: 800.352.4365
Fax: 800.848.6055

Seattle, WA Kent
Tel.: 877.327.2563
Fax: 877.327.2574

INTERNATIONAL:

Eastern Canada
Tel.: 800.431.1588
Fax: 800.848.6051

Western Canada
Tel.: 877.327.2563
Fax: 877.327.2574

Mexico & Latin America
Tel.: 800.442.6742
Fax: 800.848.6054

London, United Kingdom
Reliable Fire Sprinkler, Ltd.
Tel.: 011.441.372.728899
Fax: 011.441.372.724461

Manchester, United Kingdom
Tel: 011.44.1618774488
Fax: 011.44.1618770101

Manheim, Germany
Tel.: 011.49.621.2999.163
Fax: 011.49.621.2999.362

Järfälla, Sweden
Tel: 011.46.858088359
Fax: 011.46.858088302

Beijing, PR China
Tel.: 011.86.10.51908751
Fax: 011.86.10.51908753

Shanghai, PR China
Tel.: 011.86.21.64395450
Fax: 011.86.21.64862802

Hong Kong, PR China
Tel.: 011.852.3421.0648
Fax: 011.852.3421.0649

RelMark Group
961 Pottstown Pike
Chester Springs, Pennsylvania 19425
Telephone: 610.327.1010
Toll Free: 800.874.5880
FAX: 610.321.1011

Founded:
1993
Primary Products/Services:
Fire Sprinkler Contractor Insurance
Market Area:
U.S.A.
Hours of Operation:
8:00 a.m.-5:00 p.m., Mon.-Fri.
Management:
Top Myers, Risk Manager
Ginny Kloepping, Underwriting Manager
Nacia Lipton, Loss Control Manager
Todd Breneman, Claims Manager
Sales Contact:
Ray Rittersbach, Sales Manager
Telephone:
610.327.1010 FAX: 610.321.1011
Company Profile:
Tired of insurance companies with underwriters and claim handlers that don't understand your business? Looking for an insurance partner? Fire Sprinkler Contractors are all we do. We partner you and your broker to get you the "right" insurance. We work with your staff to prevent losses, and in the event there are claims against you and sooner or later there will be! we have a dedicated claims staff that specializes in fire sprinkler claims. You are an expert in your area of expertise. Why not start working with someone who's an expert in fire sprinkler contractors' insurance? Call your broker and have them contact us and listen to what an expert in your business sounds like. We'll partner with your broker and you to provide an insurance solution. You have nothing to lose.

SAFE Fire Detection, Inc.
5915 Stockbridge Drive
Monroe, North Carolina 28110
Telephone: 704.821.7920
Internet: safefiredetection.com

Primary Products/Services:
Linear heat detection, air sampling fire detection, water leak detection, portable direct sampling fire detection
Market Area:
Global
Hours of Operation:
8:00 a.m.-5:00 p.m. EST
Management:
Ron Robertson, President
Marvin Spehar, Marketing Manager
Jim Lloyd, Sales Manager
Kevin Snyder, Production Manager
Sales Contact:
Marvin Spehar, Marketing Manager
Company Profile:
SAFE Fire Detection provides customer focused solutions. ThermoCable linear heat detection cable may be used with any new or existing addressable or conventional fire alarm panel, no special proprietary panels are required. ProSeries air sampling fire detectors provide the earliest warning possible of a fire threat long before any smoke and offer new features not available with any other aspirating system. The ProLocator is the industry's first self-contained handheld portable aspirating fire detector. Any air sampling system can tell you which room, but only the ProLocator can tell you where in the room. The ProH2O water leak detection system is an economical alternative to other systems and may be used with an addressable or conventional panel, or as a stand alone system.

Senju Comtek Corp.
1322 Armour Boulevard
Mundelein, Illinois 60060
Telephone: 847.549.7770
FAX: 516.829.1020

Primary Products/Services:
Sprinklers
Management:
Hide Kishimoto, President

Shurjoint Piping Products, Inc.
4601 East Cheyenne Avenue,
Suite 105
Las Vegas, Nevada 89115
Telephone: 702.644.4492
Toll-Free: 877.476.6833
FAX: 702.644.1091
Internet: www.shurjoint.com

Primary Products/Services:
Grooved and threaded piping components

Market Area:
National and International
Hours of Operation:
8:00 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Mark Beach, Vice President
Sales Contact:
Mark Beach, Vice President
Company Profile:
With over three decades of experience, Shurjoint is recognized as a leader in the design and manufacture of grooved, hole-cut, and threaded piping components. Shurjoint offers a full line of grooved fittings and couplings, a complete line of ductile iron threaded fittings, welding outlets and flow control components. Shurjoint manufacturing facilities are certified to ISO 9001. The company's products are listed, approved and or certified by UL, cULus, FM, VdS, LPCB and others. Shurjoint is a proud member of the NFSA, CASA, IFSA, AFSA, NFPA, and USGBC.

Smoke and Fire Prevention Systems

110 9th Street
Clarksville, Virginia 23927
Telephone: 434.374.8537
FAX: 434.374.8217
Internet:
www.smokeandfireprevention.com

Primary Products/Service:
Sales and installation of smoke and fire prevention systems.
Management:
Toby Newcomb, Exec. Vice President

The Soffi-Steel® System/Grice Engineering, Inc.

121 East Burbank Avenue
Janesville, Wisconsin 53546
Telephone: 608.757.1335
Toll-Free: 800.800.3213
FAX: 608.757.1452
Internet: www.soffisteel.com

Founded:
1994
Primary Products/Services:
The Soffi–Steel System
Market Area:
U.S.A. & Canada
Hours of Operation:
7:30 a.m.-5:00 p.m. CST, Mon.-Fri.
Management:
Jack Grice, P.E., President
Allen Stowers, Contract Sales
Sales Contact:
Allen Stowers, Contract Sales
Telephone:
608.757.1335
FAX:
608.757.1452
Company Profile:
The Soffi-Steel® System is a custom fitted utility concealment solution designed, manufactured and optionally installed with quality driven construction by the staff of Grice Engineering, Inc. The Soffi-Steel® System safely conceals any size or type of exposed fire sprinkler system in an aesthetically appealing manner. Ideal for your retrofit or new construction applications, the Soffi-Steel® System is available for the concealment of BlazeMaster®, Victaulic Company FireLock™, KT Plastics LLC and Viking Plastics LLC CPVC sprinkler system pipe. It also exceeds the Underwriters Laboratories, Inc. listing protection requirements of lay-in panels or tile.

S-P-D Incorporated

1167 Tower Road
Schaumburg, Illinois 60173
Telephone: 847.882.9820
FAX: 847.882.9825
Internet: www.spdinc.com

Primary Products/Services:
NFPA 13D Residential Fire Pump Systems
Market Area:
Worldwide
Hours of Operation:
7:00 a.m.-5:00 p.m., Mon.-Fri.
Management:
David M. Whitfield, President
Nick Di Giovanni, Vice President
Betty Lauer, Office Manager
Jeff Kubik, Service Manager
Sales Contact:
David Whitfield, President
Nick Di Giovanni, V.P.
Company Profile:
S-P-D Incorporated is the exclusive manufacturer of THE GUARDIAN NFPA 13D Residential Fire Pump System. THE GUARDIAN is a completely assembled, self-contained, easy to install residential pump system, configured to meet your specific requirements. THE GUARDIAN serves as the heart of the residential fire sprinkler system. Once installed and in service, it provides the required capacity and pressure so that the sprinkler system can perform as designed. THE GUARDIAN meets all NFPA 13D code requirements. It is available in two models, the G5000 for wall mounting and the G3000 for floor mounting and is available in a wide range of pump sizes. Both units are available in 115 VAC and 220 VAC, single phase, depending on the horsepower of the pump. Each unit is custom assembled to the customer specifications and thoroughly tested in our factory prior to shipment. Our systems are simply designed, enabling quick and easy installation. Large selections of pump systems are in stock and ready for immediate delivery. We provide a full selection of lightweight, durable, high-density polyethylene tanks that exceed specification for installation of residential fire sprinkler systems. Our tanks are competitively priced and promptly delivered. They fit through standard 32" and 36" doorways, are rotationally molded, one-piece, free standing construction to ensure exceptional tank integrity. The tanks come complete with automatic fill valves, top entry lids, gallon markers and bulkhead fittings for suction, fill and overflow connections. S-P-D Incorporated sells, services and installs fire protection equipment, including fire pump controllers, transfer switches, jockey pump controllers, low suction shutdown panes, remote alarm panels, water storage tanks, pressure and flow switches, level control systems and related devices for residential, commercial, industrial, municipal and governmental applications. We've served the public and private fire protection industry for over 55 years. Our key staff members have more than 135 years of combined experience in this industry. Our substantial client list covers the U.S.A. and circles the globe. We provide knowledgeable and informed fire protection solutions, representing and servicing products of many of the most trusted, esteemed and respected manufacturers in the industry. Some of the products we represent and distribute include those from: Metron, Inc., Angus Fire Control, Arrow Tank & Engineering, Columbia TecTank, Dwyer Instruments, Inc., Residential Water Tanks and Xerxes Corp.

Spears Manufacturing Company
PO Box 9203
Sylmar, California 91342
Telephone: 818.364.1611
FAX: 818.362.1596
Internet: www.spearsmfg.com

Primary Products/Services
Fittings and Valves
Management:
Wayne Spears, President

SprinkFab
2900 Newpark Drive
Barberton, Ohio 44203
Telephone: 330. 848.4901
FAX: 330.848.9460
Internet: www.sprinkfab.com

Primary Products/Services:
Pipe Fabrication for Fire Protection Industry
Management:
Dennis Roberts, President

Starfire, Inc.
3550 South Iowa Avenue
St. Francis, Wisconsin 53235
Telephone: 414.483.5959
Toll-Free: 800.347.3776
FAX: 414.483.1566
Internet:
www.starfireusa.com
starfireinc@usa.net

Founded:
1987
Primary Products/Services:
Fire Protection
Market Area:
Midwest and Southwestern United States/International
Hours of Operation:
7:00 a.m. - 5:00 p.m. CST Mon.-Fri.
Management:
Raymond J. Malek, President
Denise Malek, Executive Vice President
Gil Brzezinski, Vice President
Scott Mathwig, Treasurer
Sales Contact:
Gil Brzezinski, Vice President
Company Profile:
Starfire, Inc. is an independent, full-line fire protection distributor with locations in Wisconsin and California. We offer a broad line of products, including sprinklers, fittings, valves, electronic monitoring devices, bladder expansion tanks, surge suppression tanks and fire pump systems. Our collective experience and vast product line helps fire protection contractors meet their deadlines and improve their profitability.

Starfire Systems, Inc.
9825 South 54th Street
Franklin, Wisconsin 53132
Telephone: 414.448.0100
FAX: 414.448.0101
Internet: www.starfiresys.com
Founded:
1999
Primary Products/Services:
Critical Facility Fire Protection Systems
Market Area:
Midwest
Hours of Operation:
7:00 a.m.-5:00 p.m. CST, Mon.-Fri.
Management:
Darrel Malek, President
Duane Male, Vice President
Susan Malek, Secretary
Sales Contact:
Paul Mares, Marketing Representative
Company Profile:
Starfire Systems offers critical environment fire detection and suppression systems that are specifically designed and installed to meet your particular needs. Our team of professionals will help you determine which system and type of equipment will best protect your personnel and equipment investment regardless of size, fire hazard issues or related environmental concerns. Starfire System has over 100 years of combined experience.

SUPERIOR SYSTEMS
INCORPORATED

Superior Systems, Inc.
17696 County Road 112
Bristol, Indiana 46507
Telephone: 574.848.4104
Toll Free: 800.662.0906
FAX: 574.848.5270
Internet: superiorsystemsinc.com
Founded:
1991
Hours of Operation:
8:00 a.m.-5:00 p.m.
Management:
David Alexander, President
Aaron Alexander, Project Manager
Sales Contact:
David Alexander, President
Company Profile:
Superior Systems manufactures and installs customized "soffit systems" for the sprinkler industry. Our extensive selection of products is manufactured in various gauges of steel and aluminum materials, depending on the individual project requirements and finishes. For the right product to conceal and protect sprinkler systems and keep your project "up to code and out of sight," call 800.662.0906 or visit our web site at superiorsystemsinc.com for detailed selections and information.

Suppression Systems, Inc.
301 South 3rd Street
Pennsburg, Pennsylvania 18073
Telephone: 215. 679.6291
FAX: 215.679.6028

Primary Products/Services:
Fire Suppression
Management:
Paul Kelly, Sales Representative

System Sensor
3825 Ohio Avenue
St. Charles, Illinois 60174
Telephone: 630.377.6580
Toll-Free: 800.736.7672
FAX: 630.377.7870
Internet: www.systemsensor.com

Founded:
1984
Primary Products/Services:
Fire Sprinkler System Monitoring Products
Market Area:
Worldwide
Hours of Operation:
7:30 a.m. - 5:00 p.m. CST Mon.-Fri.
Management:
John Hakanson, President
Chuck Kitts, Director of Sales
Andy Kuester, Marketing Manager
Dennis Sekermestrovich, Western Regional Manager
Sales Contact:
Chuck Kitts, Director of Sales
Telephone:
215.631.9896

FAX:
215.631.9897
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.

Telgian Corporation A TVA Company

2615 South Industrial Park Avenue
Tempe, Arizona 85282
Telephone: 480.753.5444
FAX: 480.753.5450
Internet: www.telgian.com

Primary Products/Services:
The service offerings of Telgian Companies include: Membership, advocacy and representation in industry standards making organizations.

Fire Sprinkler and Alarm Design and Engineering Services.

Customer centric Fire Protection equipment research and development.

Loss Control Services and Risk Management Information Systems.

Jurisdictional advocacy and representation for national and international clients.

International Construction Services for Fire Sprinkler and Fire Alarm systems.

Self performed Compliance Testing and Inspections.

Centralized coordination and service call management for fire sprinkler, alarm, portable extinguishing devices, back flow devices and special hazard systems.

Large scale special projects and capital replacement programs.

Fire and Life Safety program management and development.

Management:
Russell Leavitt, CEO

TOLCO, A Brand of NIBCO

1375 Sampson Avenue
Corona, California 92879
Telephone: 951.737.5599
Toll-Free: 800.786.5266
FAX: 951.737.0330
Internet: www.tolco.com

Founded:
1967
Primary Products/Services:
Pipe Hangers, Supports, Seismic Bracing
Market Area:
Worldwide
Hours of Operation:
7:00 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Scott Beutler, Vice President and General Manager, TOLCO
George Von Gnatensky, Director of Sales, TOLCO Fire Protection
Mike Golini, Director of Sales, TOLCO Mechanical/Industrial
Greg Shaughnessy, Director of Marketing
Sales Contact:
George Von Gnatensky, Director of Sales, Fire Protection
Telephone:
951.737.5599 ext. 220
Company Profile:
TOLCO® is a manufacturer of quality, UL, ULC, FMRC, NYC products including pipe hangers, supports, seismic bracing and TOL-Strut™ Channel. TOLCO has over 40 years of experience in the residential and commercial fire protection markets. TOLCO has introduced a series of new products including the Figure 75, a unique swivel attachment, and the Figure 29, a double offset CPVC hanger and restrainer for plastic fire sprinkler pipe. Both products are available through your full line distributor of TOLCO products. For more information, visit www.tolco.com.

Tyco Fire & Building Products

451 North Cannon Avenue
Lansdale, Pennsylvania 19446
Telephone: 215.362.0700
Toll Free: 800.558.5236
Internet: www.Tyco-Fire.com

Primary Products/Services
Water based fire suppression systems valves, sprinklers, SprinkCAD software, CPVC, Grinnell Mechanical
Market Area:
International
Management:
Carmine Schiavone, General Manager, Americas
Company Profile:
Tyco Fire & Building Products is a global manufacturer of water-based fire suppression system components and ancillary building construction products. It continually expands its capabilities through aggressive research and product development to provide its customers effective fire protection and construction solutions for residential, commercial, industrial and institutional buildings.

Branches:

AVON
27R Doherty Avenue
Avon, Massachusetts 02322
Telephone: 508.583.8447
FAX: 508.583.0034

BREA
3170 Nasa Street
Brea, California 92821
Telephone: 714.993.6111
Toll Free: 800.310.3366
FAX: 714.993.6043 or 714.993.2154

CAROL STREAM
Carol Court
Carol Stream, Illinois 60188
Telephone: 630.871.7700
Toll Free: 800.323.9485
FAX: 630.871.7464

COPPELL
1150 Enterprise Drive
Coppell, Texas 75019
Telephone: 972.745.0043
Toll Free: 800.442.3541
FAX: 972.745.8594

DECATUR
3080 N. Lanier Pkwy.
Decatur, Georgia 30034
Telephone: 404.243.7336
Toll Free: 800.241.9370
FAX: 404.244.7375

JESSUP
8230-C Preston Court
Jessup, Maryland 20794
Telephone: 301.604.7133
Toll Free: 800.950.9233
FAX: 301.604.7138

KENT
19307 70th Avenue South
Kent, Washington 98032
Telephone: 253.872.6030
Toll Free: 800.843.2919
FAX: 253.872.6547
Manager: Troy Wiltbank

NORRISTOWN
2800 Potshop Lane
Norristown, Pennsylvania 19403
Telephone: 610.239.9925
Toll Free: 800.523.2753
FAX: 610.239.9936

MURRAY
4303 South 590 West
Murray, Utah 84123
Telephone: 801.269.0688
Toll Free: 800.486.2767
FAX: 801.269.0733

PARMA
5565 Venture Dr.
Parma, Ohio 44130
Telephone: 216.265.0505
Toll Free: 800.741.5833
FAX: 216.265.8354

POMPANO
1802 SW 2nd St.
Suite A
Pompano Beach, Florida 33069
Telephone: 954.781.0866
FAX: 954.781.1475

TIGARD
7500 S.W. Tech Center Dr.
Suite 110
Tigard, Oregon 97223
Telephone: 503.620.4203
Toll Free: 800.210.8447
FAX: 503.620.3817

N. KANSAS CITY
1219 Macon Ave.
N. Kansas City, Missouri
Telephone: 816.842.2424
Toll Free: 800.245.9178
FAX: 816.842.4433

Unique Fittings and Flanges

12600 Cardinal Meadow
Sugar Land, Texas 77448

Telephone: 281.275.3900
FAX: 281.242.0575
Internet:
www.uniquefittingsandflanges.com

Primary Products/Services:
Pipe Fittings
Management:
William P. Vollmar, Manager

United Brass Works, Inc.

714 South Main Street
Randleman, North Carolina 27317
Telephone: 336.498.2661
Toll Free: 800.334.3035
FAX: 800.498.4696
Internet: www.ubw.com

Founded:
1910
Primary Products/Services:
Bronze Valves
Market Area:
Worldwide
Hours of Operation:
8:30 a.m. - 5:00 p.m. Mon.-Fri.
Management:
Mike Berkelhammer, President
Jim Sattler, Sales Manager
Sales Contact:
Jim Sattler, Sales Manager
Company Profile:
United Brass Works manufactures a wide range of bronze and ductile iron valves for fire protection applications. Bronze products include globe and angle valves, swing checks, ball drips, three-way gauge valves as well as OS&Y gate valves. Ductile iron products include UL/FM water check valves, groove check valves and male by female check valves.

Uponor Inc.

5925 148th Street West
Apple Valley, Minnesota 55124
Telephone: 952.891.2000
Toll Free: 800.321.4PEX
FAX: 952.891.1409
Internet: www.uponer-usa.com

Founded:
1620 yes, 1620
Primary Products/Services:
Life, safety and comfort system solutions
Market Area:
Worldwide
Management:
Jason Drake, Senior Product Manager, Fire Safety
Alan Larson, Associate Product Manager, Fire Safety
Company Profile:
Uponor is a worldwide leader in radiant heating, plumbing and residential fire safety systems using cross-linked polyethylene PEX tubing. Uponor is recognized for delivering intelligent, intuitively designed products that set the highest standards in the industry. Uponor AQUASAFE® residential fire sprinkler systems are designed as an extension of your home's plumbing. Using proven Uponor PEX-a-tubing, ProPEX® fittings and Reliable™ sprinklers, AQUASAFE® systems are available in both networked and looped configurations that meet or exceed NFPA 13D requirements. So, not only will an AQUASAFE® system save lives, it'll save money on installation and insurance costs too.

USA Tank Storage Systems

PO Box 506
14174 Highway 43
Seneca, Missouri 64865
Telephone: 417.776.2500
FAX: 417.776.2524
Internet: www.usatanksales.com

Founded:
1999
Primary Products/Services:
Belted steel tanks & erection
Hours of Operation:
8:00 a.m.-5:00 p.m. CST, Mon.-Fri.
Management:
Brian Bell, President
Chris Slinkard, General Manager,
Steve Currence, Director of Sales and Marketing
Sales Contact:
Steve Currence, Director of Sales and Marketing
Company Profile:
USA Tank Storage Systems is the single source provider for Liquid Storage and Dry Bulk Storage applications. From the initial proposal stages through engineering, fabrication, installation, and customer service after the sale, USA Tank delivers unmatched performance. We can provide turnkey solutions for all your storage needs. After decades in the tank sales and construction business, we've learned that "quality" and "value" are not negotiable. Our track record for quality and dependability is impeccable because our people apply decades of industry experience to every project, and loyalty to every customer.

Branches:
KANSAS CITY OFFICE
1600 Genesee, Suite 918
Kansas City, Missouri 64102
Telephone: 816.472.1890
FAX: 816.472.0598
Sales Contact:
Jerry Biritz
Email:
jerryb@usatanksales.com
Charles Spears
Email:
charless@usatanksales.com

SOUTH DAKOTA OFFICE
North Plains Office
Watertown, South Dakota 57201
Telephone: 605.886.4224
FAX: 605.886.4224
Sales Contact:
Robin Gravatt
Email:
robg@usatanksales.com

Victaulic Company
4901 Kesslersville Road
Easton, Pennsylvania 18040
Telephone: 610.559.3300
Toll-Free: 800.PICK.VIC
FAX: 610.250.8817
Internet: www.victaulic.com

Founded:
1925
Market Area:
Global
Management:
Bob Freidl, V.P., Sales and Market Development
Company Profile:
Victaulic is the worldwide leader in mechanical pipe joining solutions. Since pioneering grooved end technology for mechanical pipe joining in 1925, Victaulic has been providing customers the world over with innovative, reliable piping systems solutions for multiple applications and markets.

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

The Viking Corporation
210 N. Industrial Park Drive
Hastings, Michigan 49058
Telephone: 269.945.9501
Toll Free: 877.384.5464
FAX: 269.945.4495
Internet: www.vikinggroupinc.com

Founded:
1921
Primary Products/Services:
Fire protection solutions
Company Profile:
Viking is a manufacturer and distributor of innovative fire protection solutions. The company is dedicated to meeting the needs of fire sprinkler contractors with superior customer service and the most complete line of quality products. Established in 1921, Viking's products and services are now available through over 30 locations in North America and nearly 50 worldwide. For more information, please visit www.vikinggroupinc.com or call 800.968.9501.

Branch Offices:

VIKING CORPORATION
210 N. Industrial Park Drive
Hastings, Michigan 49058
Toll Free Phone: 877.384.5464
Local Phone: 269.945.9501
Local Fax: 269.945.4495

VIKING SUPPLYNET EAST
Regional Headquarters
5 Washington Avenue
Fairfield, NJ 07004
Phone: 973.227.8850
Fax: 973.227.4605

VIKING SUPPLYNET HARTFORD
Phone: 860.688.0001
Sales Contact: Tim Christie

VIKING SUPPLYNET PHILADELPHIA
Phone: 610.631.9950
Sales Contact: Jim Dooley

VIKING SUPPLYNET BALTIMORE
Phone: 301.490.5514
Sales Contact: Jim Dooley

VIKING SUPPLYNET MIDWEST
Regional Headquarters
2353 International Street
Columbus, OH 43228
Phone: 614.527.5800
Fax: 614.527.5818

VIKING SUPPLYNET DETROIT
Phone: 248.244.2929
Sales Contact: Tom Mobley

VIKING SUPPLYNET ST. LOUIS
Phone: 314.291.4800
Sales Contact: Dan Koziol

VIKING SUPPLYNET KANSAS CITY
Phone: 816.231.8211
Sales Contact: Dan Koziol

VIKING SUPPLYNET CHICAGO
Phone: 630.462.5860
Sales Contact: Ron Bergquist

VIKING SUPPLYNET ST. PAUL
Phone: 651.644.1264
Sales Contact: Jason Wardour

VIKING SUPPLYNET SOUTH
Regional Headquarters
1255 Terminus Dr.
Suite 300
Lithia Springs, GA 30122
Phone: 770.941.3080
Fax: 770.941.6389

VIKING SUPPLYNET MIAMI
Phone: 954.791.1756
Sales Contact: Mark Consigny
Sales Contact: Versie Vigie

VIKING SUPPLYNET ORLANDO
Phone: 407.656.7600
Sales Contact: Mark Consigny
Sales Contact: Versie Vigie

VIKING SUPPLYNET HOUSTON
Phone: 713. 695.6591
Sales Contact: Trey Rogers

VIKING SUPPLYNET DALLAS
Phone: 972.466.0933
Sales Contact: Perry Adams

VIKING SUPPLYNET MEMPHIS
Phone: 901.360.9401
Sales Contact: Charlie Harvell

VIKING SUPPLYNET CHARLOTTE
Phone: 704..921.3270
Sales Contact: Charlie Harvell

VIKING SUPPLYNET WEST
Regional Headquarters
4100 Bonita Place, Unit B
Fullerton, CA 92835
Phone: 714. 992.5276
Fax: 714. 992.4630

VIKING SUPPLYNET SAN FRANCISCO
Phone: 510.429.7295
Sales Contact: Dan Tornio

VIKING SUPPLYNET SACRAMENTO
Phone: 916.923.1080
Sales Contact: Dan Tornio

VIKING SUPPLYNET LAS VEGAS
Phone: 702.795.8002
Sales Contact: Scott Harrison

VIKING SUPPLYNET PHOENIX
Phone: 602.252.0400
Sales Contact: Paul Cress

VIKING SUPPLYNET SEATTLE
Phone: 253.872.8444
Sales Contact: Kevin Kane

VIKING SUPPLYNET DENVER
Phone: 303 576.0665
Sales Contact: Scott Franklin

VIKING FABRICATION SERVICES
Pennsylvania
147 Lincoln Drive
Hometown, PA 18252
Phone: 570.668.4686
Fax: 570.668.4688
Sales Contact: Jim Dooley

VIKING FABRICATION SERVICES
Illinois
640 Center Avenue
Carol Stream, IL 60188
Phone: 630.462.5860
Fax: 630.871.1898
Sales Contact: Ron Bergquist

VIKING FABRICATION SERVICES
Ohio
2353 International Street
Columbus, OH 43228
Phone: 614.527.5800
Fax: 614.527.5818
Sales Contact: Bob Fischer

VIKING FABRICATION SERVICES
Georgia
100 Piedmont Court
Suite A
Doraville, GA 30340
Phone: 770.941.3080
Fax: 770.446.3713
Sales Contact: Adam Owens

VIKING FABRICATION SERVICES
California
6480 Box Springs Boulevard
Riverside, CA 92507
Phone: 951.656.3111
Fax: 951.656.2606
Sales Contact: Scott Harrison
Sales Contact: Dave Swanson

VIKING SUPPLYNET
California
5081 Kelton Way, Suite 100
Sacramento, CA 95838
Phone: 916.923.1080
Fax: 916.923.1748
Sales Contact: Dan Tornio

VIKING FABRICATION SERVICES
Arizona
625 E. Watkins Street
Phoenix, AZ 85004.2935
Phone: 602.252.0400
Fax: 602.252.2134
Sales Contact: Paul Cress

VIKING FABRICATION SERVICES
Colorado
12360 E. 46th Avenue #400
Denver, CO 80239
Phone: 303.576.0665
Fax: 303.576.0611
Sales Contact: Scott Franklin

VIKING CANADA

Ontario, Manitoba
Viking SupplyNet
Regional Distribution Center
18 Hedgedale Road
Brampton, Ontario L6T 5L2
Phone: 905.450.2200
Fax: 905.450.2303
Sales Contact: Harv Hughey

Alberta, Saskatchewan, Manitoba, and Northwest Territories
Viking SupplyNet
#42 4216 54th Avenue SE
Calgary, Alberta T2C 2E3
Phone: 403.203.5681
Fax: 403.203.5682

British Columbia and Yukon
Viking SupplyNet
2-20120 102nd Avenue
Langley, British Columbia V1M 4B4
Phone: 604.882.2766
Fax: 604.882.2762

Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland, and Labrador
Viking SupplyNet
44 Borden AVE
Dartmouth, Nova Scotia B3B 1C8
Phone: 902.450.5194
Fax: 902.450.3411

Quebec
SCS Canada
1935 Lionel Bertrand Boulevard
Boisbriand, Quebec J7H 1N8
Phone: 450.430.7031
Fax: 450.430.9170

VIKING SUPPLYNET
Latin America
2840 SW 42nd St
Port 95 Ind Ctr Build IV
Hollywood, FL 33312
Phone: 954.791.2901
Fax: 954.791.1181
Sales Contact: Art Gutierrez

Viking Corporation Far East Pte. Ltd.
69 Tuas View Square
Westlink Techpark
Singapore 637621
Tel: +65 6 278 4061
Fax: +65 6 278 4609

HEADQUARTERS
Europe & Middle East
Viking SA
Zone Industrielle Haneboesch
L-4562 Differdange/Niedercorn
Luxembourg
Tel: +352 58-37-37-1
Fax: +352 58-37-36

Watts Regulator Company

815 Chestnut Street
North Andover, Massachusetts 01845
Telephone: 978.689.6108
FAX: 978.689.6247
Internet: www.watts.com

Founded:
1874

Primary Products/Service:
Designs, manufactures and sells an extensive line of flow control products for the water quality, residential plumbing & heating, commercial and OEM markets.

Management:
Bruce Parrott, Marketing Manager

F.W. Webb Company

152 Will Drive
Canton, Massachusetts 02021
Telephone: 781. 828.5559
FAX: 781.828.8060
Internet: www.fwwebb.com

Company Profile:
Since 1866 Webb has continuously serviced its customers in New England and upstate New York. Currently, the Webb network is comprised of 70 locations offering our complete package of Plumbing, Hydronics, HVAC, LP Gas Products, Biotech, Valve Automation and Pipe-Valves-Fittings. The core business of the F.W. Webb Company is distribution. Our unique inventory system utilizes the latest technology. Central Distribution, our 400,000+ sq. ft. facility in Amherst, NH replenishes branches daily with a fleet of tractor trailers. Also, the new pipe depot in Sturbridge, MA has four additional flatbeds which deliver pipe, copper tubing, valves and fittings to branches and major mechanical contractors. Most Webb locations have been extensively expanded or renovated in the past three years. The intent is to use technology and modern physical distribution to increase efficiency and to better serve our customers. We are proud of our 95%+ fill rates and our ISO 9002 certification.

Wheeler-REX

3744 Jefferson Road
Ashtabula, Ohio 44005
Telephone: 440.998.2788
Toll-Free: 800.321.7950
FAX: 440.992.2925
Internet: www.wheelerrex.com

Founded:
1954
Primary Products/Services:
Tools and related products for plumbing
Market Area:
International
Hours of Operation:
8:00 a.m. - 4:30 p.m. EST Mon.-Fri.
Management:
Tim Bowler, Vice President
Sam Woodland, Sales Manager
Jeff Jones, Purchasing Manager

Company Profile:
Wheeler Manufacturing Company was founded in 1957 with the invention of a unique pipe cutting tool-The Model 490 Snap Cutter. This unique cutter enabled plumbers to quickly and cleanly snap-cut soil pipe, especially well in minimum clearance situations. Over the years, Wheeler Manufacturing grew steadily, adding a sister cutter to the Model 490 Snap Cutter, the Model 590 Snap Cutter. Numerous other innovative pipe working tools followed with a fast growing distributor network. In 1988, Rex Industries of Osaka, Japan acquired Wheeler Manufacturing Company. Rex Industries is a worldwide manufacturer which produces and distributes a full range of high quality, high performance pipe threading machines. This acquisition immediately positioned Wheeler-Rex as a leading worldwide supplier to the industries it serves. Wheeler-Rex has followed that first new product introduction with countless new products and to this day, has one of the most aggressive new product development efforts of any competitor. Headquartered in Ashtabula, Ohio, Wheeler-Rex is a leading worldwide supplier to the plumbing, water works, construction, municipal, wastewater, fire sprinkler, rental, process industries and many others. Wheeler-Rex products are sold exclusively through an extensive network of authorized distributors across North America. Wheeler-Rex celebrates 50 years in business and looks forward to another 50 years of continued growth and serving the community.

Wilkins, A Zurn Company

1747 Commerce Way
Paso Robles, California 93446
Telephone: 805 238-7100
FAX: 805 238-5766
Internet: http://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
Pete Chapman, National Sales Manager
Mike Mallas, Sales Manager Fire Protection
Sales Contact:
Pete Chapman, National Sales Manager
Telephone:
415 456-7166
FAX:
415 456-7166
Company Profile:
Wilkins, a Zurn Company, Offers a complete line of American made factory set, easy field adjustable, and master zone control valves. Available in 1½" – 6" sizes, in angle and inline pattern and threaded, flanged, and grooved connections.

Xerxes Corporation

7901 Xerxes Avenue South
Minneapolis, Minnesota 55431
Telephone: 952 887-2890
FAX: 952 887-1882
Internet: www.xerxescorp.com

Founded:
1979
Primary Products/Services:
Underground Storage Tanks
Market Area:
United States
Management:
Tom Tietjen, Vice President, Sales and Marketing
Sales Contact:
Terry Jensen, Manager, Sales and Marketing Services
Telephone:
952 887-1828
Company Profile:
Xerxes is a manufacturer of fiberglass underground storage tanks which are used by the fire protection industry for storage of standby water supply. Nationwide delivery is available from four manufacturing facilities, which produce tanks with capacities up to 65000 gallons. Xerxes tanks are light weight, easy to install and price competitive with alternative products.

INTERNATIONAL FIRE SPRINKLER ASSOCIATION MEMBERS

General Air Products, Inc.
604 Jeffers Circle
Exton, Pennsylvania 19341
Telephone: 610 524-8950
FAX: 610 524-8965
Internet:
rmfremont@generalairproducts.com
Management:
Raymond M. Fremont, President

Job GmbH
Kurt-Fischer-Str. 30
Ahrensburg, D22926 Germany
Telephone: 011 49 4102 2114-0
FAX: 011 49 4102 2114-70
Management:
Eduard Job

Kidde International
c/o Angus Fire Armour
Thame Park Road
Thame, Oxfordshire
OX9 3RT England
Telephone: 011 44 1844 214545
FAX: 011 44 1844 213511
Internet: peter.johnston@kiddeuk.co.uk
Management:
Peter Johnston

Marioff International OY
Hakamaenkja 4
P.O. Box 86 Virnatie 3
Vantaa, FIN-01301 Finland
Telephone: 358 0 9 870 851
FAX: 358 0 9 870 85398
Internet: petteri.saarinen@marioff.fi
Management:
Petteri Saarinen, President

Minimax GMBH & Co. KG
IndustriestraBe 10/12
Postfach 1260
Bad Oldesloe D-23840
Germany
Telephone: 011 49 45 318 03 252
FAX: 011 49 45 318 03 137
Management:
Klaus Hoffman

Norbulb GmbH
Robert-Koch-Str 25a
Norderstedt, 22851 GERMANY
Telephone: 49-40-5244081
FAX: 49-40-5244083
Internet: job@norbulb.de
Management:
Norbert Job

Noveon Europe BVBA
Chaussee de Wavre 1945
Brussels, Belgium
Telephone: 32-2-678-1020
FAX: 32-2-678-2001
Management:
Jon Thompson

Potter Electric Signal Company
2081 Craig Road
St. Louis, MO 63146 USA
Telephone: 800 325-3936
FAX: 800 768-8377
Internet: www.pottersignal.com
Management:
Bernard J. Lears

Reliable Automatic Sprinkler Company
103 Fairview Park Drive
Elmsford, NY 10523 USA
Telephone: 914 662-4401
FAX: 914 592-8605
Internet: www.reliablesprinkler.com
Management:
Kevin T. Fee

Shanghai Jindun Fire-Fighting Security Service Co. LTD
Prosperity Industrial Zone
Zhoupu, Pudong,
Shanghai, China 201318
Telephone: 011 86 21 5811 7888
FAX: 011 86 21 5811 6666
Management:
Zhou Xiang Yi

System Sensor
P.O. Box 1424
Lansdale, PA 19446 USA
Telephone: 215-631-9896
FAX: 215-631-9897
Internet:
chuck.kitts@systemsensor.com
Management:
Charles Kitts, Sales Manager

TOLCO, A Brand of NIBCO
1375 Sampson Avenue
Corona, California 92879
Telephone: 951 737-5599
Toll-Free: 800 786-5266
FAX: 951 737-0330
Internet: www.tolco.com
Management:
George Von Gnatensky, Vice President, Sales and Marketing

Tyco Fire & Building Products
Security House-The Summit
Sunbury-on-Thames, Middlesex England
TW16 5DB
Telephone: 011 44 0 1932 743 076
FAX: 011 44 0 1932 743 047
Management:
Edward Lister

Viking Group
Zone Industrielle Haneboesch
Differdange, L-4562 Luxembourg
Telephone: 011-352-58-37371
FAX: 011-352-58-3736
Internet:
ngroos@vikingcorp.com
Management:
Nicholas Groos

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

The NFSA Industry Advancement Fund

Introduction

NFSA has initiated a fund for the advancement of the fire sprinkler industry for any sprinkler contractor, Supplier, Manufacturer, individual or organization to participate in on a totally voluntary basis. The Industry Advancement Fund will supplement the efforts of the Sprinkler Manufacturers Industry Fund and Industry Promotion Funds. Such promotional efforts include, but are not limited to legislative efforts to pass the Fire Sprinkler Incentive Act and to support the following programs and organizations:

- Design Advantage Program (Architect Training)
- Best Practices
- Center for Campus Fire Safety
- Campus Fire Watch
- Fire Team USA (and Fire Team Tennessee)
- Home Fire Sprinkler Coalition
- Adoption of fire sprinklers in the International Residential Code (IRC)
- Advertising and public relations to promote the fire sprinkler concept

The sprinkler industry is on the verge of vastly expanding current markets through legislative and code initiatives intended to result in 100% sprinkler requirements for all new commercial construction and retrofit of existing high-rise buildings. Meanwhile, the residential market offers fire sprinkler industry concerns the opportunity to expand their businesses and garner additional market share while providing life saving protection to the public.

Business Opportunity

The Chairman of the Board of NFSA, Mr. Wayne Gey, suggested the establishment of such a Fund at the NFSA Annual Seminar & Exhibition in Las Vegas in May of 2007. Subsequently, NFSA approached several contractors and inquired whether a vehicle could be established to permit any business, individual or organization to supplement industry promotion efforts already established by NFSA Sprinkler Manufacturers and union contractors.

As a result, the NFSA Industry Advancement Fund has been established to offer Contractors, Suppliers, Manufacturers and others the opportunity to provide additional revenue to support those efforts and to increase the sprinkler market. It would also allow those who participate to be publicly listed as supporting these special promotional efforts. In addition to being publicly recognized as a contributor to the Fund, Suppliers and Manufacturers making contributions to the Fund will be given credit in the current booth selection process administered by NFSA's show management firm, Exhibit Promotions Plus.

Current Business Position

Currently, there is no vehicle available for many contractors and others to participate in industry promotion efforts. The creation of this Fund provides such a vehicle.

Product/Service Description

The Industry Advancement Fund is a Section 501(c)(6) tax exempt organization under the IRS code. Contributions, except money used for lobbying efforts, are tax deductible. The Fund is separate from all other Industry Funds and NFSA. Contributions and expenditures are not commingled with other Funds or NFSA finances. All participants will receive annual audited statements reflecting all activity. All disbursements must be approved or directed by the Board of Trustees and all checks written must be signed by the NFSA President and NFSA Financial Controller.

Board of Trustees

The Fund is be administered by a Board of Trustees consisting of the President and the Executive Vice President of NFSA and three contributors elected from those participating in the Fund.

NFSA Industry Advancement Fund Hits $212,000

SimplexGrinnell
$50,000, Platinum level promoter

Wayne Automatic Fire Sprinklers
$30,000 Gold level promoter

Wiginton Fire Sprinkler
$20,000 Silver level promoter

Northern IL Fire Sprinkler Advisory Board
$15,000 Bronze level promoter

Dalmatian Fire, Inc.
$10,000, Bronze level promoter

Gregg Huennekens
$10,000, Bronze level promoter

Northstar Fire Protection of Texas
$10,000, Bronze level promoter

Engineered Fire Protection
$10,000, Bronze level promoter

Allied Tube & Conduit
$10,000, Bronze level promoter

Flexhead Industries
$10,000, Bronze level promoter

McKinstry Company, LLC
$5,000 Industry Promoter

RCI Systems
$5,000, Industry promoter

Globe Fire Sprinkler Corporation
$5,000, Industry promoter

System Sensor
$5,000, Industry promoter

Complete Fire Protection
$5,000 Industry Promoter

Bruce LaRue
$2,000, Industry supporter

Robertson Fire Protection
$2,000, Industry supporter

Tri-State Fire Protection
$2,000, Industry supporter

Wolverine Fire Protection
$2,000, Industry supporter

Harvel Plastics, Inc.
$2,000 Industry Supporter

Landmark Sprinkler, Inc.
$2,000 Industry Supporter

Financial Potential

Several voluntary contribution levels are available. They are:

- $2,000: Industry supporter;
- $5,000: Industry promoter;
- $10,000: Industry Bronze level promoter;
- $20,000: Industry Silver level promoter;
- $30,000: Industry Gold level promoter; and,
- $50,000: Industry Platinum level promoter

Contributions may be paid on an annual basis, or in twelve equal monthly installments. The above contribution levels are intended to provide interested contributors with some guidelines within which to make such a contribution but should not be considered limitations.

Summary

Adoption of this Plan by the NFSA Board of Directors has resulted in providing a vehicle for Contractors, Suppliers, Manufacturers and others to finance industry promotion efforts, much the same as unionized contractors and Sprinkler Manufacturers have done for many years. Again, participation in the Industry Advancement Fund is strictly voluntary.

To make a contribution, follow the Industry Advancement Fund link at the NFSA website at www.nfsa.org

Big Red

BY BARRY WATERMAN

A while back Bear Tracks introduced everyone to a couple of brothers from Alabama who traveled in the summers to find work as Local 669 sprinkler fitters up near Chicago, and probably to get some relief from the heat of summer in the deep south. We got a few comments about how those boys reminded readers of characters they had known in their own careers.

I'm not sure if it is peculiar to sprinkler fitters, or just that people in general are interesting if you bother to get to know them, but we have encountered other memorable characters that hung sprinkler pipe for a living – at least some of the time.

When we got our card as a Local 669 apprentice in 1967, it was a simple matter of sending a letter to Washington DC, and you got your card by return mail. A lot of things were simpler then, but when you're 19, you just don't appreciate those kinds of things.

The college we attended was on a trimester system, so I started my summer job pretty early in the year - about May first. My suburban upbringing hadn't prepared me for the gent I worked with as a helper for a couple of summers.

I showed up at the work site on my first morning with instructions to meet "Red" and provide him with whatever help he needed. The Fox River valley, about fifty miles west of Chicago, was road territory in those days. We always seemed to have work out there in one of about five or six small industrial cities along the river.

This particular morning we were starting a job replacing a long section of underground main with eight-inch overhead at a big industrial door manufacturing plant. Now remember, I'm a new apprentice on his first day. What did I know about sprinkler pipe, let alone eight-inch? But back to "Red."

Red was a big guy. I remember him in blue bib overalls over a white tee shirt with one of those big square yellow pencils in the front pocket of the bibs. He was in his early forties but he looked (and acted) like a big kid. He wore his bright red hair in a flattop crew cut and his face and arms were covered with a million freckles.

Red was a veteran of the Navy Seabees, and he had built landing strips on a lot of the islands in the Pacific theater of World War II. He claimed that nothing made him happier than to be pushing dirt around with a big, flat-bladed bulldozer. He owned some farmland in Southern Illinois, and his idea of a fun weekend was to drive three hundred miles on Friday night, push dirt back and forth with his little "crawler" as he called it, for two days, then drive back north on Sunday night. "Saturday, I decided to make a pond down behind the house, but then Sunday, I filled it in." Some weekend.

But he was a good fitter. He liked to start early, and he didn't like to take breaks. He would send me to get bad coffee from the vending machines at this big plant, but he'd keep working. We lifted lengths of eight-inch with a hand crank chain hoist, and he liked to get the pipe in hangers as quickly as possible. Before noon my first day he had me setting hangers twenty-five feet up off an extension ladder. This was not cutting grass or raking leaves like my other summer jobs.

Red taught me that work could be fun. He would call the shop in Chicago to order some materials, but he couldn't resist giving the engineer on the project some grief. He'd ask if the engineer really wanted us to run this pipe right through the outside wall of the building like it showed on the plan. The plan showed no such thing, of course, but the engineer always took his bait. "You'd think after awhile that he would be ready for my kidding, but he gets flustered every time. I'll get him next time, too."

And invariably he would. "They're just so serious," he would say, then burst out laughing.

His favorite foil was George, the company truck driver. Now George WAS pretty much of an idiot, but Red was still mean to him. He warned me the first morning George was showing up with a delivery. "Not only is George an idiot, but he says everything twice. You watch."

Sure enough, here comes our big red truck with about twenty lengths of eight-inch and assorted bags and boxes of material. Vendors still used gunnysacks in those days. (Gee, I hope "gunnysack" isn't some kind of slur. I have no idea. If it is, I most sincerely apologize.) At any rate, the unloading went something like this:

"Hey, Red. Hey, Red." "Hiya, George. Hiya, George."

"Where do you want it? Where do you want it?" "Over there. Over there."

This went on for several minutes. George said EVERYTHING twice. And Red answered by saying everything twice. George never noticed. At some point I completely lost it and had to go behind the truck holding my sides.

When the truck was empty, Red said, "How about some coffee? How about some coffee?" George shook his head. "Gotta go. Gotta go."

He climbed up into the big cab of the truck, started the engine, and through the open window said, "Take it easy, Red. Take it easy, Red." "See ya later, George. See ya later, George." And off he drove. I kid you not. I kid you not.

I turned to Red and said, "I'm worn out. I have to go home." "Like hell you are," was his reply. And sure enough, we'd have four lengths in the air by lunchtime.

Barry Waterman
Independent consultant to the Northern Illinois Fire Sprinkler Advisory Board.

RESIDENTIAL, COMMERCIAL, & INSTITUTIONAL

THE SOFFI-STEEL® SYSTEM

- Secure
- Attractive
- Versatile
- Economical
- Durable

As today's premier custom-fabricated enclosure system, the Soffi-Steel® System is being specified and installed nationwide for the concealment of any size exposed Fire Sprinkler System, Plumbing, HVAC, and Electrical Wiring within established facilities. Let the staff of Grice Engineering, Inc. provide you with a quote today.

For more information call:

1-800-800-3213

or visit www.soffisteel.com

GRICE ENGINEERING

P.O. Box 8037 • Janesville, WI 53547-8037
Phone: 608-757-1335 • Fax: 608-757-1452

BY RAY LONABAUGH

NFSA New Jersey Chapter Sprinklers At-Risk Youth Home

The fire sprinkler industry in New Jersey not only promotes the installation of fire sprinklers, but they donate their time to help local non-profits make it happen. For example, the NFSA New Jersey Chapter, through the New Jersey Fire Sprinkler Advisory Board (NJFSAB), member companies and Sprinkler Fitters Local 696 recently completed donating their time, services and materials to helping protect at-risk youth and young adults in East Orange, New Jersey at an organization named Sierra House.

Sierra House is a non-profit organization that provides shelter, counseling, job skills and basic transitional services to homeless and at-risk young women between the ages of 18 and 21 in order to help them attain a life of self-sufficiency. They recently procured a large house in East Orange, New Jersey with the vision of creating a new residence location, providing beds and services to nearly 40 women in need of transitional services. The property for many months underwent heavy construction in order to transform it from a three-story house into a residential facility that would meet the needs of Sierra House and its residents. For many months, the renovation project was proceeding successfully with grants and labor until it hit a snag: a building code requirement for automatic fire sprinklers and possibly a kitchen hood system. The project was faced with a need to scale down or possible abandonment because the code-required protection were not planned and, therefore, not included in the budget.

Keely Freeman

That's when Sierra House's Executive Director - Keely Freeman - reached out to Kent Mezaros of Quick Response Fire Protection, Inc., then Chairperson of the NFSA New Jersey Chapter. Mezaros then engaged the Chapter and the New Jersey Fire Sprinkler Advisory Board, who sprang into immediate action. Vinny Fichera, NJFSAB Executive Director, was dispatched to meet with Ms. Freeman to review the project and to determine what materials and labor would be required. In addition to the fire sprinkler and kitchen hood systems, Fichera also provided some project management consultation on his own.

The project would require a 13R residential fire sprinkler system. Once the material list and labor requirements were determined, the chapter recruited local businesses and contractors for assistance, all of which were more than ready to help. Those that sent material donations and volunteer labor for the project included:

- Ames/Watts
- Atlantic American Fire Equipment Company
- Ferguson Fire & Fabrication
- F&G Mechanical Corporation, Meadowlands Fire Protection
- Reliable Automatic Fire Sprinkler Company
- Quick Response Fire Protection, Inc.
- Simplex/Grinnell LP
- Sprinkler Fitters Local 696

The project was completed in record time, and Sierra House's new location is now open to serve. Ms. Freeman quickly expressed her appreciation on behalf of Sierra House for the automatic fire sprinkler and kitchen hood systems. The NFSA New Jersey Chapter, New Jersey Fire Sprinkler Advisory Board and all the other participating businesses wish to express their appreciation for the work Sierra House has planned to do to help young women.

CONTINUED ON PAGE 70

Ray Lonabaugh
NFSA's Mid-Atlantic Regional Manager

CONTINUED FROM PAGE 69

Sierra House provides shelter, counseling and job skills to homeless and at-risk women. The East Orange, New Jersey location has been sprinklered by NFSA's Jersey Chapter.

BY VICKIE PRITCHETT

Common Voices: An NFSA Coalition… Making Waves Across America

Once upon a time. Those 4 words conjure up memories of childhood storybooks and larger than life visions of knights in shining armor, damsels in distress, and ultimately a happily-ever-after ending. Many times we find in real life, the stories begin just like the storybooks. It's the chapters in the middle that sometimes present challenges and test our spirits. Sometimes, there are chapters filled with tragedy and heartache. Such is the case for the advocates who make up the Common Voices Coalition. However, the strength of our advocates shines through, and the good news is that there are chapters that follow for these ladies that provide inspiration and hope. Quite simply, lives are being saved as a result of collaborative efforts that have created this group.

In February of 2007, the NFSA Board of Directors brought the advocates together for a Focus Group meeting in Albuquerque, New Mexico. Board members Aus Marburger, Gregg Huennekens, and Wayne Gey participated with the group, along with their spouses. This session proved to set the course for a Coalition to be formed. The advocates selected the name, outlined their goals and began formulating a strategy that would support other initiatives of the NFSA.

"The Common Voices Coalition gets you excited," says Wayne Gey, NFSA Board Chairman. "When bad things happen to good people, good people get motivated to make a difference. You see that in each of the advocates, and they are making a difference beyond words."

The advocates quickly determined that there was a need to raise awareness of America's fire problem, and the solution – fire sprinklers. A video was created that captured the respective stories of each advocate. This video exists in a short and long version, and it outlines fire statistics that support the concept of fire sprinklers and the role they play in affecting the tragic numbers. The Coalition is hoping to appear on a national talk show, and negotiations are currently underway to make this dream a reality.

Top goals for the advocates for 2008 include support of the Fire Sprinkler Incentive Act and the IRC Fire Sprinkler Coalition. In January of 2008, the Common Voices Coalition hosted a "Day on the Hill" in Washington, D.C. that included support from the following Allied Organizations: NFSA, Congressional Fire Services Institute, International Association of Fire Chiefs, United States Fire Administration, National Fire Protection Association, Home Safety Council, International Association of Fire Fighters, Fire Sprinkler Fitter Local Leadership, National Fallen Firefighters Foundation, The Phoenix Society, International Code Council, Center for Campus Fire Safety, Fire Team USA, and the National Volunteer Fire Council. The advocates lead "teams" that included representatives from each of the allied organizations and fire service leadership from across the nation. Over 50 congressional office meetings were held and the efforts have been noticeable with over 20 new co-sponsors of the Fire Sprinkler Incentive Act since the Common Voices event. Hill visits were coordinated by our lobbyist McAllister and Quinn with follow-up visits being coordinated by Andy Quinn.

In early 2007, Senators Gordon Smith (R-OR) and John Rockefeller (D-WV) in the Senate and Representatives Jim Langevin (D-RI) and Eric Cantor (R-VA) in the House of Representatives, introduced the Fire Sprinkler Incentive Act of 2007. The proposed legislation is S. 582 in the Senate and H.R. 1742 in the House.

Through the efforts of NFSA and many allied support groups, the bill will allow property owners who retrofit their buildings with fire sprinklers to accelerate depreciation of the systems and recoup their investment in a much shorter period of time versus the 39 years currently in place. This bill will give property owners a significant incentive to install fire sprinkler systems on a retrofit basis.

According to the National Fire Protection Association, when fire sprinklers are present, the chances of dying in a fire are reduced by one-half to three-fourths and the average property loss per fire is cut by

CONTINUED ON PAGE 72

Vickie Pritchett
NFSA's Associate Director of Public Fire Protection and Common Voices Director.

CONTINUED FROM PAGE 71

one-half to two-thirds, compared to fires where fire sprinklers are not present.

The Common Voices Coalition includes:

- Amy Acton of Michigan - burn survivor and Executive Director of The Phoenix Society
- Vina Drennan of New Jersey - lost her husband, Captain John Drennan of FDNY, in a fire
- Donna Henson of Missouri - lost her son, Dominic, in a fire
- Bonnie Woodruff of North Carolina - lost her son, Ben, in a fire
- Gail Minger of Florida - lost her son, Michael, in a fire
- Justina Page of Texas - lost her son, Amos, in a fire

Together these advocates will highlight America's fire problem in hopes of making a difference by sharing their tragedies.

The advocates will also participate in efforts of the IRC Fire Sprinkler Coalition in support of RB64, which will add residential fire sprinkler requirements into the main body of the International Residential Code. The Code hearings will take place in September in Minneapolis, Minnesota. For additional information on this initiative, visit www.ircfiresprinkler.org.

By providing direction for the formation of the Common Voices Coalition, the NFSA Board of Directors has demonstrated exceptional foresight," said NFSA President John Viniello. "Our Advocates, each with a unique inner strength to overcome in the wake of unthinkable tragedy, have become the fire sprinkler industry's 'unexpected messengers.' Their collective efforts will make a tremendous impact in advancing the fire sprinkler concept."

There is a solution to America's fire problem; it's automatic fire sprinklers. In the years that follow, when we look back on efforts that went into making fire sprinklers a way of life, the Common Voices Coalition role will be a significant one.

In closing, and speaking on behalf of the Coalition, we are extremely grateful for this opportunity and remain optimistic as we continue our campaign to save lives all across the United States from the ravages of catastrophic fire.

For current information on the Common Voices Coalition, visit www.fireadvocates.org.

BY RALPH R. MEHR D.Sc.

The Variable Orifice Automatic Sprinkler

From the day the automatic fire sprinkler was invented, the orifice of the sprinkler has had a fixed value defined by the diameter and shape of the orifice. This characteristic creates some limitations to sprinkler performance, and different applications often require different sprinklers. In a fire, more water from the initially opened sprinklers would enable faster control of the fire, but flow is limited by the orifice size. In order to improve sprinkler efficiency, and to broaden the range of application, a new concept of a variable orifice sprinkler has been patented *(Mehr, 2007)*.

At present, the basic characteristic of the water flow from sprinklers is defined by the equation:

$Q=K*p^{1/2}$

where

Q = flow [gpm]

P = pressure [psi]

K = a constant coefficient [gpm/psi½]

This equation is the basis of hydraulic calculations for sprinkler systems and the K-factor is specific to each sprinkler. In the case of Light and Ordinary Hazard occupancies a K-factor of 5.6 gpm/psi½ may be sufficient, while for storage occupancies recent tests have shown higher K-factors to be more effective. *(Thomas & Tomes, 2002)*

Improper choice of K-factor may have negative results. Using a K factor that is too small will result in the need for high pressure in order to supply the required water flow. This may require the use of a fire pump where it would not otherwise be required based on available public water system pressure. A K-factor that is too high will waste water because of the minimum starting pressure (7psi) needed, which may make the available public water supply insufficient based on flow, or require a bigger water storage tank.

THEORY OF THE VARIABLE ORIFICE

In an average system, the standard demands calculation of approximately 12 sprinklers to control the fire at a safe area. The sprinklers start operating one after the other according to the development of a fire. Typical statistics shows that in 27% of the cases only one sprinkler is needed to control the fire, and in 65% of the cases up to five sprinklers are required. The number of sprinklers needed depends on the fire development rate and on the amount of water applied in the early stages of the fire. System hydraulic calculations take into account the total water capacity needed to control a fire in the worst case, and, accordingly, the total pressure needed to deliver it to the fire. At the beginning of the sprinkler system response to the fire, the first operating sprinkler will receive the entire pressure available in the system. This pressure will be reduced, gradually, as additional sprinklers start operating. For example, in an ordinary hazard occupancy in which the most remote sprinkler is required to flow a minimum 25 gpm, it is not unusual for the first operating sprinkler to flow 45 gpm or more, which is 80% more water. Later, the flow will be gradually reduced as more sprinklers start operating. This fact explains how one sprinkler may control the fire at its early stages.

A way of maximizing this feature is to replace the constant orifice sprinkler with a variable orifice sprinkler (VOS). This will change the constant K-factor to a variable factor, defined as V, with the same units of gpm/psi½. The factor V will be a function of the pressure: V = F(p), and the basic equation of the hydraulic flow from a sprinkler will take the form:

$$Q=V*p^{1/2}$$

The exact formula is defined according to the following conditions:

1. It should comply with the range of pressure as established by NFPA 13, i.e. between 7 psi and 175 psi.
2. It should comply with the range of K-factors established within NFPA 13, i.e. between 5.6 gpm/psi½ to 28 gpm/psi½.
3. It should respond to the pressure in a way that when the pressure decreases so will the orifice size.

The V equation may take the form of:

$$V=a*pb$$

CONTINUED ON PAGE 74

Ralph R. Mehr, D.Sc.

A well known figure in the Israeli fire protection community, Dr. Mehr serves as the Chairman of the Israeli Fire Protection Association and operates his own fire protection consulting firm.

CONTINUED FROM PAGE 73

Inserting the above NFPA conditions into this equation will give the formula for V as follows:

$$V=2.12*p1/2$$

By inserting to the equation of Q the formula of V, the Q equation will become:

$$Q=2.12*p$$

The final function will be derived from further research and the construction of the VOS.

Figure 1 depicts this in graphic form.

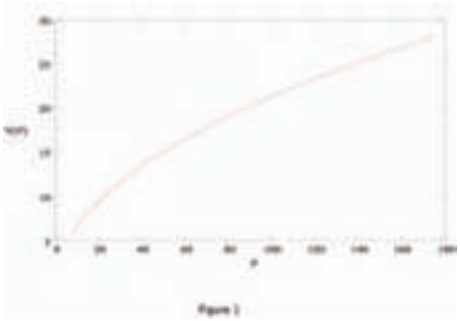


Figure 1 represents the value of V(gpm/psi½) as a function of the pressure p(psi).

One way to determine the efficiency of the Variable Orifice Sprinkler is to compare the performance of the VOS to that of standard sprinklers, i.e. the output of the flow Q(gpm) as a function of the pressure p. Two sprinklers were taken for this comparison, the standard sprinkler with K=5.6 gpm/psi½, marked by a dotted line, and the largest sprinkler currently available, with K=25.2 gpm/psi½, marked by a dashed line. In Figure 2 those two sprinklers are compared to a VOS with a flow characteristic Q=2.12*p, marked by a straight line.

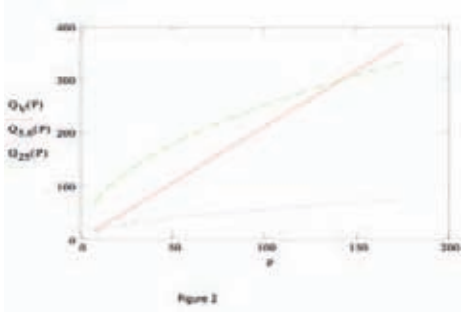


Figure 2 clearly shows better performance at high pressure compared to both of the constant orifice sprinklers while still effective at a low pressure (compared to the ESFR which is known to lose its momentum).

Construction of the Variable Orifice

There are various ways to construct the Variable Orifice. Models are shown in Figures 3 through 5 (Mehr).

A1 A2

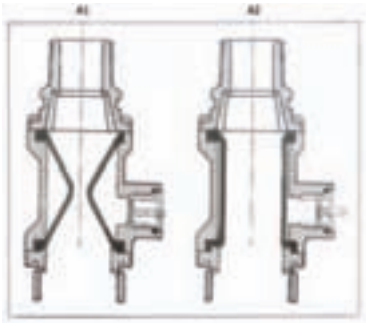


Figure 3

Figure 3 depicts the use of an add-on device. This device is installed between the sprinkler (which has an extra large orifice) and the pipe. In Position A1 the device is in a stand-by position. The thick black lines represent an elastic sleeve diaphragm containing an appropriate fluid under pressure from a piston pushed by a spring (indicated at the right hand side), forming an inside orifice. When pressure starts building in the device, it flattens the diaphragm and enlarges the orifice.

In Position A2 the device is under maximum pressure, which pushes the diaphragm all the way to the device walls, enabling the orifice to reach its maximum size. The advantage of this configuration is that it is based on existing tested sprinkler designs, saving a lot of research time, but it may not be the most cost effective configuration.

B1 B2

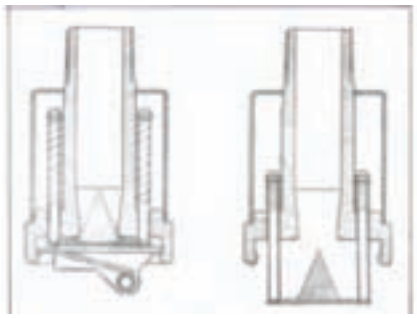


Figure 4

Figure 4 depicts a special sprinkler built with a Variable Orifice. This special sprinkler resembles a concealed or an institutional sprinkler where the deflector pops out. However, the sprinkler incorporates two changes: The rods of the deflector are held in place by springs and a cone is added to the inside of the deflector. Using this arrangement, as the pressure is increased, the cross section of the orifice is enlarged.

Position B1 is a stand-by position and Position B2 is at maximum pressure with the orifice at its maximum size. The configuration of the cone will determine the exact function of the V factor.

Development of this type of sprinkler may require extensive research, more than needed for a regular sprinkler. As such, its development may not be cost effective.

Finally, a Variable Orifice Sprinkler could be built by adding a special low cost insert to an existing Large Orifice sprinkler:

C C1 C2

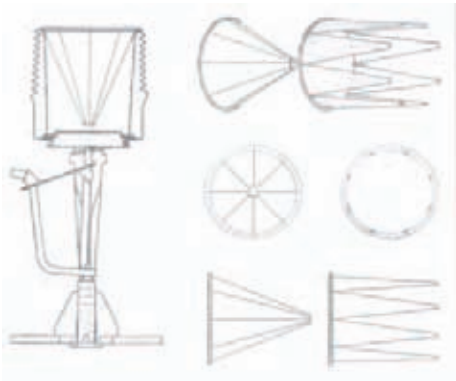


Figure 5

The insert enables conversion of a Large Orifice Sprinkler like the K-25.2 ESFR to a multi-purpose sprinkler with the ability of controlling fires in various occupancies.

Figure 5 shows a Large Orifice Sprinkler with the insert in the stand-by position.

Position C1 is the insert in the closed position from side, top and axonometric views.

Views depicted as Position C2 are of the insert in the open position.

In principal, all configurations must not be in on/off position, and must have a minimum opening to ensure proper operation.

CONTINUED ON PAGE 75

CONTINUED FROM PAGE 74

THEORETICAL FEASIBILITY STUDY

This section compares a model of typical sprinkler system installed with various K-factor sprinklers to the same system installed with Variable Orifice Sprinklers, in order to establish the optimal performance and the limitations of each type of sprinkler.

The model covers an area of 150 ft x 125 ft x 25 ft high, and is made of schedule 10 steel pipes as follows:

- 1½-inch branches, 112.5 ft long with 10 sprinklers installed 12.5 ft apart.
- A 3-inch cross main, along the building at the middle.
- A 3-inch riser, connecting the cross main with the water source, including an alarm check valve.

The model was calculated with four different types of sprinklers: K= 8gpm/psi½, K=11.2gpm/psi½, K=16.8gpm/psi½ and sprinkler with a variable V factor.

192 calculations were made to enable comparison between four sets of available pressures at source:

- the minimum required to comply with the standard
- a low pressure of 60psi
- a medium pressure of 100psi, and
- high pressure of 175psi.

For each system with each type of sprinkler, up to 12 sprinklers were calculated, starting from the first sprinkler and adding one additional sprinkler unit for each calculation.

The first set of calculations, shown in Table 1, determines the minimum pressure needed to comply with the standard requirements. For each calculation, the flow in gpm is given. The number in brackets represents the minimum pressure in psi needed at the source.

Conclusions:

- The results for V are similar to those of K=8.
- The flow values are higher as the K factor increases, but this result may not be applicable because of the high pressure needed at source.

The second set of values in Table 2 illustrates the flow delivered for each case where the pressure at source is 60 psi.

Number of Sprinklers	K=8.0	K=11.2	K=16.8	V
1	25.0 (21.8)	29.6 (19.5)	44.4 (21.4)	25.0 (22.5)
2	50.3 (24.4)	60.0 (23.2)	91.2 (29.4)	50.5 (25.1)
3	78.1 (25.2)	112.4 (29.4)	150.8 (32.2)	80.6 (26.0)
4	107.7 (28.4)	158.0 (35.8)	221.9 (44.0)	114.9 (30.0)
5	133.8 (30.1)	166.0 (31.5)	269.5 (49.9)	140.8 (31.2)
6	156.9 (32.2)	186.1 (32.9)	291.3 (52.0)	157.0 (32.2)
7	184.6 (33.0)	227.7 (35.8)	369.1 (60.3)	193.8 (34.5)
8	211.3 (34.9)	259.9 (38.5)	417.5 (66.3)	220.4 (36.4)
9	244.7 (39.7)	309.2 (46.6)	525.0 (91.5)	266.2 (42.7)
10	272.2 (42.4)	349.5 (50.9)	595.2 (103.2)	300.4 (45.9)
11	300.2 (44.8)	378.2 (54.2)	633.8 (110.2)	322.5 (48.1)
12	318.6 (46.6)	395.3 (56.3)	650.4 (113.3)	336.0 (49.6)

Table 1 – Minimum p of 7 psi

The results from Table 1 are shown in Table 2 for comparison.

Number of Sprinklers	K=8.0	K=11.2	K=16.8	V
1	25.0 (21.8)	29.6 (19.5)	44.4 (21.4)	25.0 (22.5)
2	50.3 (24.4)	60.0 (23.2)	91.2 (29.4)	50.5 (25.1)
3	78.1 (25.2)	112.4 (29.4)	150.8 (32.2)	80.6 (26.0)
4	107.7 (28.4)	158.0 (35.8)	221.9 (44.0)	114.9 (30.0)
5	133.8 (30.1)	166.0 (31.5)	269.5 (49.9)	140.8 (31.2)
6	156.9 (32.2)	186.1 (32.9)	291.3 (52.0)	157.0 (32.2)
7	184.6 (33.0)	227.7 (35.8)	369.1 (60.3)	193.8 (34.5)
8	211.3 (34.9)	259.9 (38.5)	417.5 (66.3)	220.4 (36.4)
9	244.7 (39.7)	309.2 (46.6)	525.0 (91.5)	266.2 (42.7)
10	272.2 (42.4)	349.5 (50.9)	595.2 (103.2)	300.4 (45.9)
11	300.2 (44.8)	378.2 (54.2)	633.8 (110.2)	322.5 (48.1)
12	318.6 (46.6)	395.3 (56.3)	650.4 (113.3)	336.0 (49.6)

Table 2 – Minimum Pressure 60 psi

Conclusions:

- At the worst case, when all 12 sprinklers operates, the flow in the VOS system almost converges to the flow in the K=8 type, which means less waste of water and minimal size of water tank.
- The advantage of systems with higher value of K factor is the delivery of high flow at the beginning of the fire, i.e. fewer sprinklers may be needed to control the fire. On the other hand, at the worst case a higher degree of water damage may be expected.
- Sprinklers with high value of K factor will not be allowed in this case, as it will not reach the minimum pressure of 7psi required by the standard.

Table 3 shows the results of the calculation for a medium pressure of 100psi and a high pressure of 175psi, respectively.

As more water is delivered with fewer operating sprinklers, it is expected that the number of sprinklers required by the standard will decrease. Theoretically the minimum flow to control the fire for this case is 1500 ft2 x 0.2gpm/ ft2 = 300 gpm (as in example 3.2 above). In Table 3, for each set of calculations, the first flow exceeding 300gpm is marked in blue.

Number of Sprinklers	P = 100 psi				P = 175 psi			
	K=8.0	K=11.2	K=16.8	V	K=8.0	K=11.2	K=16.8	V
1	71.6	96.5	132.4	154.2	97.6	131.4	180.9	225.8
2	131.2	166.3	207.2	199.6	179.0	227.8	284.0	300.7
3	197.6	251.8	317.5	311.7	269.6	344.6	436.2	474.6
4	247.1	305.7	372.4	351.4	337.8	419.1	512.6	529.8
5	295.0	355.9	417.1	391.8	403.9	489.0	575.5	579.3
6	330.8	387.7	439.2	408.0	453.8	534.0	607.3	597.1
7	379.7	444.1	504.6	472.7	521.1	611.8	697.6	694.9
8	417.8	481.8	537.8	499.3	573.9	664.3	743.9	727.3
9	440.8	500.8	553.6	518.0	606.2	690.7	766.4	758.8
10	474.0	533.4	N/A	543.2	662.4	736.8	808.8	788.8
11	498.8	554.0	N/A	555.4	697.0	765.6	828.9	802.0
12	515.2	565.2	N/A	561.5	710.2	781.9	837.2	807.9

Table 3

Conclusions from the theoretical feasibility study:

- Variable Orifice Sprinkler (VOS) does not overflow the area of operation when maximum sprinklers are required; as more sprinklers open, the orifice decreases.
- In the process of sprinkler operation, the first sprinklers deliver significantly more water which may eliminate the need for more sprinklers to control the fire and to use the advantage of Early Suppression in all Hazard Occupancies.
- In the case of medium and high pressure at the source, three or two sprinklers (respectively) will exceed the minimum 300gpm needed to control the fire. This conclusion is, of course, theoretical. Further research is needed to determine the exact number of sprinklers required as a function of the pressure at source, and to determine the optimum pressure at source.

The above theoretical feasibility study does not take in account the large droplet effect, which may improve the performance of the VOS specifically for regular hazard

CONTINUED ON PAGE 76

CONTINUED FROM PAGE 75

occupancies versus ordinary sprinklers, as will be demonstrated below.

PHYSICAL FEASIBILITY STUDY

A partial feasibility study was done by a group of students at the Worcester Polytechnic Institute (WPI) to compare the performance of the VOS to that of the ESFR sprinkler (Barnett et al, 2005). The VOS used in the study was constructed in a manner similar to that shown in Figure 4, because of the time limit assigned to the project and the lack of tools to produce an inserted element.

The first parameter determined by WPI for the specific sprinkler (Figure 6) is the Variable K-factor. This was done by two separate procedures:

Figure 6

The first procedure included recording pressure by use of a pressure gauge and determining flow by use of a stop watch and graduated cylinder. An additional test was performed to determine the K-factor range of the variable orifice sprinkler, except more precise measures were used. This time, a pressure transducer was used to average pressure over time and a scale was used to determine the volume of water dispersed. The test was conducted to provide

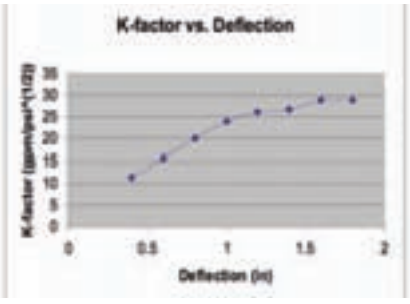


Figure 7a: K-factor vs. Deflection - Procedure 1

a more accurate means of determining K-factors. The two figures below show the K-factor function for the deflection of the sprinkler deflector which is a direct function of the pressure. The correspondence between these two figures to the theoretical function of the VOS from Figure 1 is outstanding.

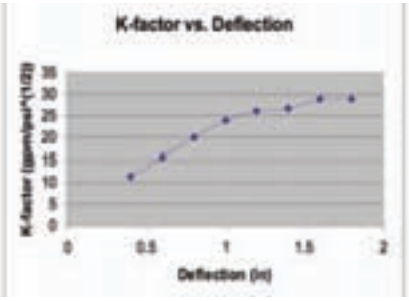


Figure 7b: K-factor vs. Deflection - Procedure 2

The second parameter was a comparison of droplet size in ESFR vs. VOS at high and low pressures.

Sprinkler Type	Droplet Size Description	
	High Pressure	Low Pressure
ESFR	The ESFR sprinkler had large drops but there was also a fair amount of mist that was created by the sprinkler as well.	The ESFR barely had drops at this pressure. It was closer to a continuous drip of water at the center of the spray pattern with a small canopy at which the droplets were large, but with no thrust.
VOS	The VOS had smaller drops than the ESFR sprinkler, but the same amount of mist was created.	The VOS had large drops that were also mixed with a little mist. There was quite obviously a better developed spray pattern, but the water in the center of the spray pattern was noticeably reduced.

Table 4

The performance of the VOS deflector was not optimized and it can be refined to give equal or better performance than that of the ESFR.

The third parameter measured is a comparison of spray pattern of ESFR vs. VOS at high and low pressure. Table 5 shows that the spray pattern radius of the VOS is larger than of the ESPR at high and at low pressure.

Sprinkler Type	Spray Pattern Radius in meters (ft)	
	High Pressure	Low Pressure
ESFR	4.04 (13.3)	1.30 (4.25)
VOS	4.36 (14.3)	2.19 (7.17)

Table 5

The photos in Figure 8 illustrate the comparison between the spray patterns of the ESFR vs. the VOS and demonstrate clearly the wide range of operation of the VOS regarding the pressure range.

Figure 8

CONCLUSIONS OF THE PHYSICAL FEASIBILITY STUDY

The physical feasibility study found that the VOS performs similarly to the ESFR at medium and high pressure and better at a low pressure. At very low pressure, the VOS behaves similarly to a standard sprinkler but with the advantages of larger drop size.

CONCLUSIONS AND SUGGESTIONS FOR ADDITIONAL RESEARCH

The VOS can operate within a wide range of pressures. It demonstrates a high degree of flexibility, and can operate in all types of occupancy hazards and storage types. As the first sprinklers deliver much more water, it is expected that fewer sprinklers will be needed to control or even to suppress the fire. As a result, less water might be needed and less water damage is expected.

Additional research will be needed in the determination of the optimal function of V in the basic equation (Q=V*P½) so that the first sprinklers will deliver the maximum possible water, while all sprinklers calculated will deliver a total amount of water, as required by the standard. As the insert type device (Figure 5) seems to be the most cost effective, the insert should be designed to best comply with the optimal function of V, as determined above. A full scale research program to re-determine the minimum number of sprinklers needed for each occupancy hazard should be performed. The research should also determine if the VOS fulfils the criteria of Quick Response Early Suppression (QRES) sprinklers as

CONTINUED ON PAGE 77

CONTINUED FROM PAGE 76

originally envisioned in 1987 (Budnick & Fleming, 1996).

Acknowledgments

The author would like to acknowledge the excellent work done by Professor Jonathan Barnet and the students Kuhn Brian, Plati Joseph, and Purtell Andrew in testing the Variable Orifice at the WPI – Worcester Polytechnic Institute. The author would also like to thank Mr. Russell Fleming of the National Fire Sprinkler Association and Mr. Arthur Cote of the National Fire Protection Association for reviewing this article and their helpful remarks and suggestions.

References

Barnett, J., Kuhn, B., Plati, J., and Purtell, A., "Sprinkler Head Design – A Major Qualifying Project Report", Worcester Polytechnic Institute, 2005.

Budnick, E. and Fleming, R., "Developing an Early Suppression Design Protection for Quick-Response Sprinklers", Supplement 4, Automatic Sprinkler Systems Handbook, National Fire Protection Association, 1996.

Mehr, R. Ralph, "Automatic Fire Sprinkler having a Variable Orifice" US Patent No.: US 7,237,619 B2, July 3, 2007.

Thomas, W. and Tomes, W., "The Effect of Large Orifice Sprinklers on High Challenge Fires", Supplement 2, Automatic Sprinkler Systems Handbook, National Fire Protection Association, 2002.

NATIONAL FIRE SPRINKLER ASSOCIATION, INC.

Wisconsin adopts latest edition of NFPA 1, Uniform Fire Code™

The state of Wisconsin has adopted the most recent edition of NFPA 1, Uniform Fire Code™. The adoption became effective on March 1, 2008.

Recognized worldwide and adopted statewide in 20 states, NFPA 1, Uniform Fire Code provides requirements necessary to establish a reasonable level of fire safety and property protection from hazards created by fire and explosion. Its primary purposes are to address basic fire prevention requirements and reference or extract the fire prevention and protection aspects of many other National Fire Protection Association (NFPA) codes and standards.

Wisconsin has participated in training and is scheduled for future trainings through programs developed by NFPA and offered to states that have adopted NFPA 1 and other key NFPA codes and standards. Instruction provided by NFPA technical experts covers the codes' requirements and the numerous ways they can be utilized and enforced. This training and the associated codebooks are free to government code enforcement officials.

For further information, visit NFPA's Web site at www.nfpa.org.

The Fire Protection Research Foundation names William M. Carey Award Winners

The Fire Protection Research Foundation, an affiliate of the National Fire Protection Association (NFPA), announced the winners of the William M. Carey Award. The winning paper in the suppression category was Investigation of Hold Time Calculation Methodologies for Total Flood Clean Extinguishing Agents, authored by Todd Hetrick and Paul Rivers of 3M Fire Protection. The winning paper in the detection category was An Analysis of the Performance of Residential Smoke Detection Technologies Utilizing the Concept of Relative Time, authored by Elizabeth Milarcik, Stephen Olenick, and Richard Roby of Combustion Science and Engineering, Inc.

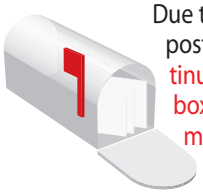
Awards were be presented at the Fire Protection Research Foundation's 2008 conference on Suppression and Detection Research and Applications (SUPDET) held March 11-13 in Orlando, Florida.

The award was established in 2001 to recognize the most outstanding presentation at the suppression and detection conference. Winners for best presentation at the previous year's conference are chosen based on a vote by participants and awards are given the following year. It is named after William Carey, P.E., senior staff engineer at Underwriters Laboratories, Inc. Carey made many major contributions to new fire suppression technologies and served on various technical advisory committees on the Foundation.

The SUPDET conference brings research into practice and emphasizes real-world applications of new documentation in designs, approvals, and codes. It provides an opportunity for fire detection and suppression professionals to share new information, innovations, and plans regarding upcoming research.

The 2008 SUPDET program included the presentation of more than 36 papers on compelling topics including fire detection, predicting detector response in practical applications, and the latest updates on halon alternatives and their appliances. The program also included a workshop on video imaging detection systems.

NFSA ADDRESS CHANGE



Due to changes at the local post office, NFSA is discontinuing the use of the P.O. boxes for NFSA and IP mailings (Box 1000 and Box 448). Mail will be delivered directly to NFSA at 40 Jon Barrett Road. As such, please discontinue the use of the P.O. boxes in all correspondence, payments, billings et al. sent to NFSA headquarters in New York. The post office will forward from the P.O. boxes for a while, but at some point in 2007 will stop honoring the forwarding instructions.

NFSA Board Elects New Slate of Officers at Scottsdale Meeting

The NFSA Board of Directors has just announced from its meeting in Scottsdale, Arizona the following new slate of officers who will each serve 2-year terms: Gregg Huennekens of United States Fire Protection, Chairman; Dennis Coleman of Engineered Fire Protection, Vice Chairman and Kevin Fee of Reliable Automatic Sprinkler Company, Treasurer. It was also announced that Kevin Fee has been selected to be this year's recipient of the highly coveted Golden Sprinkler Award, the association's highest honor. He will be presented with the award at the NFSA Annual Seminar being held at the Atlantis in the Bahamas this May.

NFSA Area Director Election Results Announced

NFSA is pleased to announce the results of recently conducted elections for Area Directors. NFSA Area Directors hold positions on the association's board of directors. In the race for the at-Large Director seat, Fred Kroll of Alliance Fire Protection was elected. In area elections, Donald DeLuca of SRI Fire Sprinkler Corporation was re-elected in Area 1. Wayne Gey of Wayne Automatic Fire Sprinkler was re-elected in Area 4. Gregg Huennekens of United States Fire Protection was re-elected in Area 6. Todd Little of RCI Systems was re-elected in Area 9 and Kent Mezaros of Quick Response Fire Protection was elected in Area 2. Each will serve 3-year terms.

NFSA "Leap 29" SAM Membership Campaign Comes to Close

Last year, NFSA introduced the SAM membership campaign "Leap 29." In recognition of 2008 as a leap year, the campaign offered new SAM members a 29% discount on membership and on advertising in the association's flagship publication, SQ magazine. When the campaign closed on February 29, NFSA had six new Supplier and Manufacturer members. Please join us in welcoming the following: ASCO Power Technologies, BAVCO, Dixon Powhatan, Master Control Systems Inc., PHD Manufacturing Inc. and Plumbers Supply Company. NFSA fire sprinkler contractor members are asked to keep the names of our SAM members in mind when consideration is being given to making purchases.

Industry Advancement Fund Receives $212,000 in Contributions

The positive response by the Fire Sprinkler Industry to the newly created Industry Advancement Fund (IAF) has been impressive. With the most recent contribution of $5,000 by The McKinstry Company, the fund now totals $212,000. Supporters have rallied behind the idea of a fund that is solely designated for the benefit of the entire fire sprinkler industry. The IAF is opened to contractors, suppliers and manufacturers, as well as anyone else interested in supporting the fire sprinkler concept. Proceeds from the IAF will be used solely to support industry advancement efforts and to increase the fire sprinkler market.

NFSA Promotes Gengler and Bowman

NFSA has announced the promotion of Dan Gengler and David Bowman to the newly created positions of Associate Director of Regional Operations. While continuing in their current roles as regional managers – Dan in the North Central region and David in Florida – in their new positions, both will have direct report responsibilities from other regional managers. Regional managers east of the Mississippi River will report to David and those in the west will report to Dan. Both Dan and David will continue to report to Buddy Dewar, NFSA's Director of Regional Operations.

Dwelling Sprinklers Again Rejected by IRC Committee

In a repeat of last year's events, a proposed requirement for sprinklers in single-family homes was rejected by the committee that oversees the development of the International Residential Code (IRC). The vote took place at the February International Code Council (ICC) code hearings in Palm Springs, California. As a result, a two-thirds vote will be needed to overturn the committee at the Final Action Hearings scheduled for Minneapolis, Minnesota in September of this year. A parallel proposal to require sprinklers in townhouses was also rejected, but a subsequent floor vote passed by a vote of 87 to 82, automatically generating a public comment that will indicate the majority support expressed at the meeting.

In the February 2008 issue of NFSA's newsletter GrassRoots, interested readers will find an article summarizing the arguments that have been raised to not include fire sprinklers in the body of the IRC and NFSA's report of the corresponding facts.

NFSA Welcomes Bruce Lecair as New Regional Manager for the West Region

Bruce Lecair, a 31-year fire service veteran, has taken over the position of Regional Manager for NFSA's West Region following the retirement of Sam Husoe. The states of California and Hawaii comprise NFSA's West Region.

Bruce joined the Woodland, California Fire Department in January of 1979 and rose through the ranks to Assistant Fire Chief where he served as Fire Marshal for six years. Perhaps Bruce's most significant contribution while at Woodland was the development of a Citizens Emergency Response Team Program, which was used as best practice model for other communities in Northern California He served the Northern California Fire Prevention Officer's Association as co-chair of the Fire Equipment and Devices Committee and served for two years on its Board of Directors. He is a past president of the Yolo County Fire Prevention Officers Association. Bruce served on the Title 19/NFPA 25 Ad Hoc Working Group and was deeply involved in the recent code changes now contained in NFPA 25.

"We are thrilled to have Bruce as our new regional manager for NFSA's West Region," said NFSA President, John Viniello, "Bruce's experience and dedication to the Fire Protection Industry will serve our members well. We expect Bruce to be a productive and innovative member of the NFSA team."

Bruce can be reached at 25417 Hyacinth Street, Corona, California 92883, or at lecair@nfsa.org, Telephone and Fax 951.377.3517, Cell Phone 951.805.8992.

REGIONAL ROUNDUP

Viking SupplyNet Adds New Territory Manager in Virginia

Viking SupplyNet announces the addition of **Charles Robison** as Territory Manager for the Virginia area.Robison will be based out of Viking SupplyNet's new Richmond, Virginia distribution and fabrication facility, which is set to open in early May.

Robison joined the Viking SupplyNet sales team effective January 21, 2008. As a Territory Manager for Viking SupplyNet, Robison will be responsible for developing and enhancing the company's relationship with fire sprinkler contractors in Virginia.

New Territory Manager Joins Viking SupplyNet's South Region

Viking SupplyNet is pleased to welcome a new Territory Manager, **Allen Sneathen**, to its South Region Sales Team. Sneathen, who joined the company effective February 6, 2008, will be responsible for developing and enhancing the company's relationships with fire sprinkler contractors in Georgia and parts of North Florida.With a diverse sales and operations background, Sneathen is well-positioned to help expand Viking SupplyNet's sales capabilities in the Territory and serve as a valuable resource to the company's customer base.

Reliable Promotes Courtney Fee

Courtney Fee was promoted to Northeastern Sales Representative for The Reliable Automatic Sprinkler Co. in November, 2007.

Courtney interned in the Reliable sales and marketing department for 5 summers during high school and college. After receiving a BA in finance from Boston College in 2005, Courtney began working full time as an Inside Sales Specialist in the New York office. After two years in Inside Sales, Courtney has moved to outside sales and will now be reporting directly to Tom P. Field, Regional Sales Manager of Region 5.

Courtney is the daughter of Kevin T. Fee, Executive Vice President of Reliable, and is eager to contribute to Reliable's success as a fourth generation family member.

NORTHEAST

DOM KASMAUSKAS, REGIONAL MANAGER

Boston Lawmakers Consider Sprinkler Plan

Faced with landlords using loopholes to sidestep a law requiring sprinkler systems, Beacon Hill lawmakers in Boston, Massachusetts are considering a plan to mandate automatic sprinkler systems in all commercial buildings exceeding 7,500 square feet.

The proposal, approved in late February by a key legislative committee, would mandate sprinkler systems that could have slowed the inferno that started in the vacant Millennium nightclub in Lawrence, Massachusetts on Jan. 21, destroying a city block.

Under current law and regulation, the nightclub's building, which was under renovation, did not require fire suppression systems.

Owners of commercial buildings can avoid a current law by using separate additions, each under 7,500 square feet, to expand without being required to install a sprinkler system. The new legislation would consider buildings in their entirety. Square footage would include the total floor areas for all floor levels, basements, sub-basements and additions. All buildings with permits approved after July 1, 2008, would be subject to the new regulations.

Dominick Kasmauskas is the NFSA Regional Manager for the Northeast Region. He can be reached at Kasmauskas@nfsa.org or1436 Altamont Ave. Suite 147 Rotterdam, New York 12303 Phon e914414.3337, Fax 518.836.0210.

MID-ATLANTIC

RAYMOND W. LONABAUGH, REGIONAL MANAGER

New Jersey High-Rise Fire Sprinkler Retrofit

On February 27th, 2008, Vinny Fichera and Dave Kurasz of the New Jersey Fire Sprinkler Advisory Board (NJFSAB) attended a meeting that was organized by NJ State Senator Robert Gordon. The intended purpose of the meeting was to discuss issues involving the high-rise sprinkler retrofit regulation proposal. Most of those in attendance, with the exception of fire safety personal, were not in favor of the proposed regulation. As usual with fire sprinkler retrofit proposals, cost figures were presented that were higher than those calculated by the NJFSAB. Also, the usual cry that the proposal will have a negative impact on affordable housing. The NJFSAB has put a lot work in this effort and we believe their figures are accurate. Hopefully the third party that is to be hired by the NJ Department of Community Affairs, to study the costs, will reach that conclusion.

The proposal did not get the intended support from the New Jersey Fire Service during the comment period in the NJ Register. DFS Deputy Director Bill Kramer expressed his disappointment with the lack of fire service support at the NJ Fire Codes Advisory Council meeting on February 20th. Deputy Kramer pointed out that the fire service has been looking for such a proposal for years and now has failed to adequately support it.

Raymond W. Lonabaugh is the NFSA Regional Manager for the Mid Atlantic Region. He can be reached at: Lonabaugh@nfsa.org or P.O. Box 126, Ridley Park, Pennsylvania, 19078. Phone: 610.521.4768.

SOUTHEAST

WAYNE WAGGONER, REGIONAL MANAGER

North Carolina Fire Service Associations Push for Sprinklers

Representatives of the North Carolina Fire Marshals Association, the North Carolina Association of Fire Chiefs and the North Carolina Firefighters Association attended The February meeting of the North Carolina Building Code Council in Raleigh to support a proposal to amend the residential code to require residential sprinklers in all new homes that are either larger than 3,600 square feet or greater than two stories in height, including any basement or piling levels.

The North Carolina Building Code Council voted down a motion to form an ad-hoc committee to prepare a code amendment

CONTINUED ON PAGE 81

CONTINUED FROM PAGE 80

and instead referred the issue to the residential committee of the North Carolina Building Code Council.

The proposal focuses on larger-than-average homes because they are harder to escape in the event of a fire.

Wayne Waggoner is the NFSA Regional Manager for the Southeast Region. He can be reached at: Waggoner@nfsa.org or PO Box 9, Andersonville, Tennessee 37705, Phone (863) 947-3393, Fax (863) 381-0597.

FLORIDA

DAVE BOWMAN, REGIONAL MANAGER

FAC 69A-46

Several issues are pending in Florida. Florida Administrative Code (FAC) 69A-46, which was written quite some time ago is still not in effect. The rule was referred back to the Joint Administrative Procedures Committee (JAPC) for review. In part, 69A-46 addresses ITM requirements for tagging fire sprinkler systems. At this time there is no indication when it will be passed out of committee.

Water Supply Economics Issue

A joint letter was submitted to the State Fire Marshal's Office requesting through the State's Chief Financial Officer, Alex Sink request Governor Crist to convene a legislative study commission to review the various issues involved in water supply economics. Several key problem areas were identified and suggestions for relieving the problems were made in what is viewed as one of the largest barriers to providing adequate residential fire protection. The letter can be viewed on the Florida Fire Sprinkler Association, a chapter of NFSA, web site at www.FloridaFireSprinkler.com

David Bowman is the NFSA Regional Manager for the Florida Region. He can be reached at Bowman@nfsa.org or 6572 SE 173rd, Court Ocklawaha, Florida 32179. Phone 845.519.7648, Fax 661.455.3968.

GREAT LAKES

JEFF HUGO, REGIONAL MANAGER

One Fatality, Wayne State University Students Homeless after Fire

Investigators with the Detroit, Michigan Fire Department's arson unit are looking into the cause of a blaze that gutted an apartment building on February 28th, killing one man and displacing at least 100 people near Wayne State University.

University Police Chief Anthony Holt called the blaze a 100% loss. According to sources, the fire began around 3:45 a.m. in the bedroom of an apartment in the Forest Arms complex on Second Avenue. John Robinson, 47, was found inside, badly burned.

The fire spread quickly, partly because of the age of the building, which was built in 1904. It had smoke detectors but no sprinkler system. At least 100 people lived in the building, which had four vacant units. Around 20 were Wayne State students, mostly athletes.

The local chapter of the American Red Cross helped displaced residents find temporary housing. Some students were taken to the Wayne State student center for meals and to set up temporary housing in residence halls.

Jeff Hugo is the NFSA Regional Manager for the Great Lakes Region. He can be reached at Hugo@nfsa.org or 1088 West Borton Road, Essexville, Michigan 78732 Phone 845.519.5963, Fax 989.891.0494.

ILLINOIS

BOB KLEINHEINZ, REGIONAL MANAGER

Around the State of Illinois

• The Northern Illinois Fire Sprinkler Advisory Board (NIFSAB) Illinois chapter of NFSA, has taken the lead and has introduced legislation to make it illegal to sell or install a fake fire protection device. Currently it is possible to purchase a smoke detector and a sprinkler head that is equipped with a camera. This bill would provide fines of $100 for the first offense/per day, $500 for the second offense/per day and $1,000 for the third offense/per day.

• Another item that NIFSAB lobbyist, Margaret Vaughn, will be working on is the possibility of a homestead improvement exemption for the installation and maintenance of a residential fire safety sprinkler system.

• Hats off to Northwestern University in Evanston and to Chief Alan Berkowsky of the Evanston Fire Department for having a nearly perfect fire safety record. In a recent article Chief Berkowsky was quoted as saying, "About 90% of Northwestern University's living units currently have automatic sprinkler systems" The large homes, he said, might sleep 20 or even 30 people and are comparable to small hotels, but the codes that govern them are the same as traditional single-family residences.

Bob Kleinheinz is the NFSA Regional Manager for Illinois. He can be reached at Kleinheinz@nfsa.org or 509 Dawes Street, Libertyville, Illinois 60048. Phone 914.671.1975.

NORTH CENTRAL

DANIEL J. GENGLER, REGIONAL MANAGER

Fire Sprinkler Forum

The NFSA-Minnesota Chapter promoted the first annual Minnesota Building/Fire Code Fire Sprinkler Forum that was held February 26, 2008 at the Mermaid in Moundsview, Minnesota. Aimed at helping Authorities Having Jurisdiction and contractors find common ground on local ordinances and municipal polices, the program was attended by authorities having jurisdiction and fire sprinkler contractors. The session addressed issues that can make the process for installing fire sprinkler protection a commitment by the parties to ensure systems being installed more uniformly in the region. A joint committee of NFSA members and AHJs met for months to establish an educational program complete with expert presenters. The Minnesota State Fire Marshal Division and the State Fire Chiefs actively participated in the process and it is hoped to trigger future educational opportunities for all parties.

Sprinkler Kids Trademarked

The Minnesota Chapter of the NFSA has finally gotten their Sprinkler Kids trademarked. The logo showing children-type sprinklers is used on bookmarks and rulers with some products covering the country.

CONTINUED ON PAGE 82

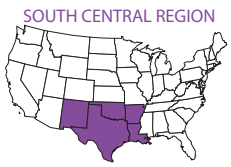
CONTINUED FROM PAGE 81

The trademark must be displayed indicating the Minnesota ownership.

Dan Gengler is the NFSA Regional Manager for the North Central Region. He can be reached at Gengler@nfsa.org or PO Box 280, Williams Bay, Wisconsin 53191. Phone 262.245.5255, Fax 262.245.5258.

SOUTH CENTRAL

STEVEN E. RANDALL, REGIONAL MANAGER



Schools across Oklahoma not Inspected, without Sprinkler Systems

Nearly half of the schools in Oklahoma have not been inspected by the state Fire Marshal's Office in at least 10 years, according to an investigation done by the Tulsa World newspaper. No records exist of an annual inspection for 262 of the 530-plus public school districts in the state. Surprisingly, schools in Oklahoma are not required to have an annual fire inspection.

Oklahoma State Fire Marshal Robert Doke said the matter is a sore spot with him and his agents. Doke is chagrined to point out that prisons and jails are required to be inspected annually while there is no law on the books requiring annual inspections for schools.

The existing law simply states "all schools must be inspected" without mention of how often. Based on the state Fire Marshal's Office database of school inspections through 2007, it appears that some schools in Oklahoma may never have received a state inspection.

Doke said he thinks only half the school buildings in Oklahoma have sprinkler systems. Schools built before 1980 are unlikely to have had sprinkler systems. Mounds Elementary School, destroyed by an Oct. 20 fire that began in the gymnasium, did not have a sprinkler system. The school's roof construction, which included a metal covering on top, prevented firefighters from getting water to the fire from the outside.

Terry Smith, the agent who investigated the school's fire, said he thought as many as 500 school buildings in Oklahoma have the same kind of construction.

Steven Randall is the NFSA Regional Manager for the South Central Region. He can be reached at: Randall@nfsa.org or 7165 Lazy Meadow Lane, Frisco, Texas 75034 Phone 972.668.4022, Fax 972.668.4077.

CENTRAL

CHRIS GAUT, REGIONAL MANAGER

Sprinkler Saves Garden City, Kansas Bakery

A fire caused by an electrical short in a display case caused minor damage to a Garden City bakery on March 1, 2008. Garden City Fire Chief Allen Shelton said firefighters were dispatched to Dillons West, 1211 W. Buffalo Jones Ave., shortly after 4 a.m. Upon arrival, the firefighters discovered the blaze had already been extinguished by the fire sprinkler system.

A spokesperson for Dillons said three employees and a cleaning person were in the store when the fire occurred.

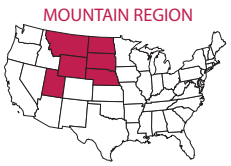
According to the investigation, an electrical short in a display case located in the bakery sparked a fire that damaged the case and some ceiling tiles. Everyone was evacuated from the store and the fire activated the sprinkler system, which put out the fire. Some products in the bakery, deli and produce departments were destroyed.

The fire delayed the store from opening at 6 a.m. but, because of the quick work of the sprinkler system, the store did open for business 4 1/2 hours later.

Chris Gaut is the NFSA Regional Manager for the Central Region. He can be reached at gaut@nfsa.org or 189 Eureka Town Center Dr. Suite 135, Eureka, Missouri 60325 Phone 845.803.6426, Fax 636.410.7700.

MOUNTAIN

TERRY PHILLIPS, REGIONAL MANAGER



Quasquicentennial Celebration in Kearney, Nebraska

The Kearney Volunteer Fire Department will celebrate 125 years of service to the city of Kearney, Nebraska with a Quasquicentennial celebration in July of 2008. More details of this monumental event will be forth coming on the Kearney Volunteer Fire Department website at www.kvfd.net.

Fire in Auburn, Nebraska Apartment Building Kills One

An apartment fire in Auburn, Nebraska killed one woman and critically injured her husband on February 21, 2008. Others jumped out of windows to escape the smoke and fire.

The Nemaha County Attorney identified he victim as 45 year old Shawnee Hammer. Her husband, Gene Hammer, was flown to a Lincoln hospital with severe burns.

Neighbors stated that Hammer used oxygen tanks to help her breathe. They speculated one of those tanks may have exploded during the fire, shortly after firefighters arrived.

The Nemaha County Attorney said the fire began in the Hammer's living room.

Five area fire departments responded to the emergency.

Terry Phillips is the NFSA Regional Manager for the Mountain Region. He can be reached at: Phillips@nfsa.org or Phone 914.525.4396, Fax 307.514.0406.

SOUTHWEST

DOYLE SUTTON, REGIONAL MANAGER

Sprinkler Save at Virginia City, Nevada Museum

A small fire at the historic Fourth Ward School Museum in Virginia City, Nevada caused by the spontaneous combustion of construction materials early on February 1, 2008 could have destroyed the 131-year-old building if not for a fundraising campaign by Jack Daniel's Distillery, which paid for the installation of a fire sprinkler system.

The museum, which from 1876 to 1936 served as the Fourth Ward School, educated generations of children during its heyday.

Executive Director Barbara Mackey said the fire began in a room adjacent to one undergoing renovation as a waterproof, fireproof, climate-controlled vault to store the historic mining town's archives for use by students and historians.

It didn't even burn through the floorboards before the sprinkler system, pur-

CONTINUED ON PAGE 83

CONTINUED FROM PAGE 82

chased from State Fire Protection Co. of Reno, activated and three sprinklers put the flames out before any damage could be done.

There was very little water damage, Mackey said, since the room where the fire began used to be a home economics classroom and had drain holes in the floor.

The Jack Daniel's connection began in spring of 1988, when they pledged a percentage of the purchase of each bottle of Jack Daniel's products sold that month to go toward restoring the Historic Fourth Ward School Museum.

A company representative couldn't be reached for comment, and Mackey said she didn't know how much the effort raised, but it was enough to purchase and install the sprinkler system, which, when tested in January 1989, proved effective, as it did Friday.

Local historian Chic DiFrancia said the whole building would be gone without the sprinklers and the effort from Jack Daniel's.

Doyle Sutton is the NFSA Regional Manager for the Southwest Region. He can be reached at: Sutton@nfsa.org or Phone 845.803.3785, Fax 307.514.0406.

WEST

BRUCE LECAIR, REGIONAL MANAGER

Galt approves fire sprinkler ordinance

The city of Galt will become the first in the region to mandate fire sprinklers in all new

homes and businesses. The Galt City Council approved the new sprinkler ordinance by a 4 to 1 vote at its regular meeting on March 4, 2008.

69 people in the Sacramento area have lost their lives in residential fires over the past eight years. The new city law requires a second reading next month, and is scheduled to go into effect this May. It does not apply to detached buildings such as garages or sheds.

It does, however, apply to home remodels that double the size of a home.

Bruce Lecair is the NFSA Regional Manager for the West Region. He can be reached at: Lecair@nfsa.org or Phone & FAX 951.377.3517.

PACIFIC NORTHWEST

DON PAMPLIN, REGIONAL MANAGER

Washington State Legislation for Fire Sprinklers

Two important bills are before the House that are very important for the advancement of residential fire sprinkler protection:

House Bill 1442: Creating a model plan for private residential sprinkler water charges.

This bill, if passed, would have required the State Building Code Council to develop a model pricing plan for private residential fire sprinkler water charges by December 1, 2007. The council must survey other states during the development process and make the supporting data available to local jurisdictions upon request. The present status of this bill is by resolution. It was reintroduced and maintained in present status on January 14, 2008.

House Bill 2292: Addressing private residential sprinklers.

This bill, if passed, would have directed the State Building Code Council to form a technical advisory group (TAG) to research and review policies and procedures for residential fire sprinklers. It declares that the purpose of the study is the eventual development of a model building code policy for residential fire sprinkler installation and services. It requires the State Building Code Council to report these findings of the Technical Advisory Group to the appropriate committees of the Legislature by January 15, 2008. The present status of this bill is by resolution, it was reintroduced and maintained in its' present status. The Washington Fire Chiefs Association supports these bills.

Don Pamplin is the NFSA Regional Manager for the Pacific Northwest Region. He can be reached at Pamplin@nfsa.org or 1436 Harrison Avenue Blaine, Washington 98230 Phone 380.332.1948, Fax 380.422.1752.

New Products from TOLCO

TOLCO®, a brand of NIBCO INC., now offers a versatile concrete deck insert, for use in metal deck formed concrete, to attach hanger rods or seismic bracing attachments. The Fig. 150 Wing-It insert allows for pre-positioning in poured concrete decks.

TOLCO's Wing-It, Figure 150 deck insert, features a steel flange nut that bites into metal decks to ensure no tipping of anchor, before or during concrete pour. It attaches to various shaped holes including cut, drilled, punched or burned; and the narrow diameter anchor allows closer placement of individual anchors. It can be easily converted from a female coupling attachment to a male stud attachment once installed, for flush mount and seismic fitting installations. Additionally, no tools or "banging" are required to install.

The U.L. Listed, FM Approved (pending OSHPD approval) Wing-It is available in sizes ranging from 3/8" through 7/8".

Also new is a double offset CPVC hanger and restrainer for plastic fire sprinkler pipe. The newly designed TOLCO Figure 29 will ease installation by eliminating the need for a wood block extension and allow retro-fit attachment of the hanger to the sprinkler pipe.

This product attaches easily to wood structures with two special #10 x 1 screws and provides a double offset 1-1/2" x 1-1/2" from the mounting surface. Figure 29 is available in ½" and 1" pipe sizes. Figure 29 meets and exceeds the requirements for NFPA 13, 13R and 13D.

Now available is a unique swivel attachment making it versatile for several applications. TOLCO's Figure 75 has 360/90 degree swivel properties that make it easier for the installer to hang rods on a pitched roof, and to use it as an upper attachment for fire protection branch line restraint or as a seismic attachment for hanger rods.

The Figure 75 is made of steel with an electro-galvanized finish. This product meets the Underwriter's Laboratories (U.L.) listing for 3/8" rod, to support up to 4" pipe.

For more information, contact TOLCO's Customer Service Department at 1-800-786-5266. Additional product information and literature are available for download at www.tolco.com.

Lubrizol Announces Enhancements to Website

The Lubrizol Corporation announces several new enhancements to its FGG/BM/CZ System Compatible program website, www.systemcompatible.com. This new online initiative allows customers and end users of FlowGuard Gold®, BlazeMaster® and Corzan® pipe and fittings faster and easier access to program updates as well as a guide to help determine chemical compatibility.

The FGG/BM/CZ System Compatible program website takes users through step-by-step instructions to assist in determining chemical compatibility of materials that may come in contact with CPVC. The site also includes an online feedback form for direct communication and the opportunity to register for regular updates to the program and other chemical compatibility infor-

CONTINUED ON PAGE 85

CONTINUED FROM PAGE 84

mation. The system compatible program is continually updated to ensure the most accurate list of chemically compatible products. Registering for this service allows users immediate notification via email of the most up-to-date list of chemically compatible products and program information.

The FGG/BM/CZ System Compatible program, which began in 2001, tests and monitors ancillary products on an ongoing basis to ensure their chemical compatibility with Lubrizol CPVC piping systems.

All designated products qualify for the program by undergoing rigorous testing, which assures the product will not fail as a result of chemical incompatibility. Because CPVC products are made with base resins having different molecular weights and varying chlorine contents and compound additives, the FGG/BM/CZ System Compatible Program can verify chemical compatibility only with the products with which they have been tested.

Products in the program display the FGG/BM/CZ System Compatible mark on their label. This mark quickly assures installers that the product is chemically compatible with FlowGuard Gold, Corzan and BlazeMaster CPVC products. Only manufacturers that have passed these specific chemical compatibility tests are able to place the FGG/BM/CZ compatible mark on their product labels.

The FGG/BM/CZ System Compatible Program is the only known program of its kind in the industry designed to increase user confidence and help eliminate the guesswork about which products are chemically compatible. The program is in active use in the United States, Canada, Mexico, 25 European countries, the United Arab Emirates, India and China.

To learn about all the chemical compatible products in the program, call 888-234-2346, x4477393 or visit www.system-compatible.com.

With headquarters in Wickliffe, Ohio, The Lubrizol Corporation owns and operates manufacturing facilities in 20 countries, as well as sales and technical offices around the world. Founded in 1928, Lubrizol has approximately 6,800 employees worldwide. Revenues for 2006 were $4.0 billion. For more information, visit www.lubrizol.com.

NIBCO Announces Fresh Look for NIBCO.com

NIBCO, Inc. unveiled a new look for its NIBCO.com home page, offering visitors better access to new product information, career opportunities, and a "What's New" area that will highlight pertinent corporate and product information.

The visually enhanced home page will make it easier for visitors to locate valuable resources and tools including the catalog/price sheet area – a popular destination for regular site visitors. In addition, NIBCO offers a "Contractor & Engineer Corner" to make it easy to locate submittals, product specifications, and the newly expanded 2D/3D library that contains a broad selection of CAD drawings.

NIBCO.com, first launched in 1997, has been continuously updated to provide the latest product information, price sheets, product brochures, catalogs, and specification guides.

Survey Says Americans Incorrectly Feel Safer From Fire At Home

A nationwide survey conducted by the Society of Fire Protection Engineers (SFPE) reveals that 79 percent of Americans feel safer from fires at home than in a public building with an additional nine percent feeling equally safe in both locations.

These results are inconsistent with government statistics that show that home fires outnumber all other building fires by over three to one. At the same time, most fire deaths and injuries occur in the home.

Public buildings are subject to tough fire-safety regulations and inspections, whereas most homes are not.

Fire protection engineers are responsible for designing ways to protect people from fire. They use the latest technologies to design systems that control fires, alert people to danger and provide means for escape. Fire protection engineers also conduct fire safety research on consumer products and construction materials and investigate fires to discover why protective measures failed, and how those measures could have been designed more effectively.

Similar results were found in a 2005 survey conducted by SFPE, where 87 percent of Americans believed they were safer from fires at home than in a public building.

"It's disheartening to see that public perception is not changing," says Jelenewicz. In spite of this, SFPE is working hard to increase the awareness of the importance of home fire prevention. Recently, SFPE partnered with Discovery Education to create and release new high school chemistry lessons that teach students about the science of fire — a project that was funded by the Department of Homeland Security. As a result of this project, every high school student in the United States will have the opportunity to better understand the dangers of home fires."

Along with the false sense of security at home, the survey also found that 44 percent of Americans think about the dangers of fire once or twice a year or less.

As part of Engineering Week, February 17-23, 2008, SFPE hopes to draw attention to fire safety and the role of fire protection engineers. They will be sponsoring an award for best fire protection engineering at the 2008 National Engineers Week Future City Competition. Future City is a national competition that introduces seventh- and eight-grade students to the exciting world of engineering.

The survey, commissioned Society of Fire Protection Engineers and conducted in January 2008 by Synovate, polled more than 1,000 American adults. The findings have a margin of error of plus (+) or minus (-) four percent.

Tyco Offers Free Residential Sprinkler Training

Tyco Fire Suppression & Building Products is taking its message directly to home builders, architects, contractors and developers through free residential fire sprinkler training.

Aiming to help those become more familiar with sprinkler technology, the training provides information and hands-on instruction in a variety of home fire sprinkler-related issues. Seminars are held over a two-day period at TFSBP's Global Technology Center in Cranston, R.I. Attendees will see how fire sprinklers contain fires and how new sprinkler technologies are tested.

More information on Tyco can be found at http://www.tyco.com.

CONTINUED ON PAGE 86

CONTINUED FROM PAGE 85

Metraflex Introduces Never•Trip™ Drain Valve

A new condensate drain system for dry fire sprinkler systems gives contractors added value to include as part of their design and installation. The new Never•Trip™ condensate drain valve replaces the old drum drip system with a single valve that prevents accidentally tripping the system during routine maintenance.

Meeting NFPA 13 guidelines, the Never•Trip™ helps your customers and building owners by enhancing the operation of the fire sprinkler system, assuring it stays on line and operational during routine maintenance. In addition, it won't freeze and break like traditional ball valves, again keeping the system operational at all times.

The Never•Trip™ valve is a complete, compact valve and collection chamber assembly and conforms to NPFA 13 and is pretested and pre-assembled. Easy to install, and even easier to use, the Never•Trip™ auxiliary drain valve and collection chamber assembly collects, closes and drains condensate by turning a single handle. There is no way to accidentally trip the system. No special tools are needed. Just remove the drain plug and turn the handle to the "drain" position to remove the collected condensate.

As the handle is turned, the valve is closed in all directions. AT NO TIME IS THE SYSTEM ABLE TO ACCIDENTALLY TRIP. In the drain position, condensate drains from the collection chambers. The handle is then returned to the collect position and the process repeated until all condensate has been removed from the system.

For more in*formation please visit www.nevertrip.com, or contact the Metraflex Company, 2323 W. Hubbard Street, Chicago, IL 60612; 312-738-3800.*

System Sensor New Fire Alarm Control Panels for Monitoring Sprinkler Systems

The newest additions to the System Sensor fire sprinkler systems monitoring line are the PDRP-2001 and PDRP-2001E fire alarm control panels (FACPs). These deluge releasing control panels are compatible with conventional sprinkler system input devices, tamper switches, 2-wire smoke detectors, 4-wire smoke detectors, pull stations, pressure switches, and other normally-open contact devices.

The PDRP-2001 and PDRP-2001E panels supervise wiring, AC voltage, battery charge, and battery level. They have four outputs that are programmable as notification appliance circuits (NACs) or releasing circuits. Three programmable Form-C relays (factory programmed for alarm, trouble and supervisory) and 24 VDC special application resettable and non-resettable power outputs are also included on the main circuit board.

These System Sensor sprinkler panels are listed to UL 864, 9th edition. Each offers 100% programmable relays, 80 character LCD display, 256 event history, and the ability to download history to a computer.

For more information about the new System Sensor PDRP-2001 and PDRP-2001E control panels, contact System Sensor at 800/736-7672 or visit www.systemsensor.com.

Victaulic to Open Expanded Distribution Center in Redlands, CA

Victaulic announced plans to open a Distribution Center in Redlands, CA in early 2008. The new 75,390 square foot facility, at 26682B Almond Avenue, will serve as a primary distribution point for Victaulic products and tools.

The Redlands facility will replace an existing 41,000 square foot distribution facility in Long Beach, CA.

Viking Adds Extended Coverage Options to Mirage® Concealed Sprinkler Line

Viking has expanded its Mirage® line of commercial concealed sprinklers to include two new quick response, extended coverage products. The new VK632 [5.6 (81) K factor] and VK634 [8.0 (115) K factor] sprinklers are cULus listed and FM approved for 135°F (57°C), 155°F (68°C), 175°F (79°C), and 200°F (93°C) temperature ratings.

Designed with the installer in mind, Viking's Mirage flat-plate concealed sprinklers include an easy "push on, thread off" cover plate. The cover plate also installs on the inside of the sprinkler cup providing better protection from drywall mud, paint, and other debris. In addition to a smaller takeout dimension, the sprinkler's deflector is aligned with the bottom of the sprinkler cup for easier calculation of drop lengths.

Viking also offers special tools for its Mirage line allowing the installer to remove the sprinklers' protective caps and install cover plates from the floor, without the use of a ladder. The cap removal tool, which doubles as a "leave behind" wrench for the sprinkler cabinet, attaches to a length of one inch (DN25) CPVC, making it possible to remove the plastic caps from the floor. Once the protective cap is removed, installers can use Viking's innovative cover plate installation tool. This tool, which attaches to the other end of the CPVC pipe length, enables the installation of cover plates without using a ladder.

Viking offers two cover plate options for its Mirage line. The standard cover plate, at 2-3/4 in (70 mm) in diameter, is best suited for installations where aesthetics are a priority. The large cover plate (3-5/16 (84 mm) diameter) offers the greatest horizontal foregiveability for maximum installation flexibility. Both Mirage cover plate options are available in nine standard finishes as well as over 900 custom colors.

THE EC-17 CAN HELP REDUCE YOUR COSTS:

- Reduces Number Of Sprinkler "Heads" Installed
- Extended Coverage – Maximum 196 sq. ft. (14′ x 14′) Spacing
- Designed For Area/Density Applications Of 0.25 GPM/Sq. Ft. Or Higher
- Hydraulic Calculations Based On Actual Spacing – Can Be Spaced At 15′ x 9′7″ (144 ft^2 Max Per NFPA 13)
- Pendent Design Is Ideal For Retail Applications

Extend, protect and save with Tyco today.
Call 1.800.523.6512, or visit www.tyco-fire.com.

10 YEAR LIMITED WARRANTY

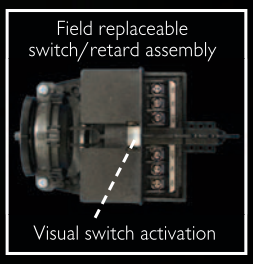
tyco Fire & Building Products

There are several reasons why Potter is the best in the industry.

This is one.

This is just one device, but it's the lifeblood of your sprinkler system - the new VSR flowswitch. Replacing the old model VSR-F, the new VSR is the only device with a non-corrosive saddle bushing and NEC 760.136 compliant separate high/low wiring chambers. The VSR is also built with a field replaceable switch/retard assembly and visual switch activation.

This is just one reason Potter is the best.
See the rest at www.pottersignal.com



The Symbol of Protection

866-572-3005 www.pottersignal.com