Spring Edition - 2013

Fusible Link Newsletter

UTAH OFFICE OF THE STATE FIRE MARSHAL

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Points Of Interest:

- How Are We Doing - Professionalism
- Highlights -Winter Fire School Industry Training – January 11, 2013
- Ventilation Training.
- The Soap Box - AHJ's Who are they and How Can They Help?
- Strategies for dealing with Dangerous Fire Extinguishers
- A Code Moment
- Safety – Ladders
- Having a bad day?

So How Are We Doing?

As I head out on my annual business inspection runs, the licensees I visit often come up with some of the most provocative and interesting questions. There are generally three things I hear at virtually every stop I make. First, how is Coy Porter to work with and who will be the new Chief Deputy? The answer to this is simple; Fire Marshal Coy Porter is great to work for and is a highly skilled and professional FM. At this time we are in the middle of the legislative session, and nobody is talking or thinking about the new Chief Deputy. Sky lanterns and other important legislative questions are taking precedent at this time. Second, "My business isn't doing well!" "My business is O…K…?" "My business is doing great, but... the competition is out-of-control! We are losing customers due to so many FP companies competing for the same business and the economy is just terrible!" The only answer I can share is: in a business climate like this and where there is a mandate and safety standard laws, just go out and "kick-the-bushes," that is, sell, sell, and sell. You must believe in your product and "Skill and Service" is valuable. Sell it! Three, So how are we doing with licensing the cleaners and certifying their technicians? The answer to this is a little harder to get to. We just don't know yet. Those that are licensed are doing well; however, there are those companies that do not, or will not, step up to licensing. It is difficult to get the word out relating to the value, reason, and the importance of being licensed to do the business of Kitchen Exhaust System Inspection and Cleaning, and to have technicians hold a Certificate of Registration.
Answering the question of, "how in the world is being certified helping me to scrape-out grease ducts?" is difficult for some to understand. However…

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How Are We Doing - continued

There is a quick, but important answer to the question. It is simply **"Professionalism"**. The long and short of it is companies are more professional when they follow certain standards. One standard is State Licensing. With State licensing, companies and their professional technicians are identified as: 1. Licensed, 2. Maintaining liability insurances, 3. Following and adhering to industry standards and laws. 4. Technicians are well trained, knowledgeable and professional in all aspects of the business, 5. The technicians look, act and demonstrate the part of a professional service person by holding to industry standards and following time proven principles from NFPA 96, NFPA 17A, OSHA Safety Standards. They use manufacturer manuals and journals, National Fire and Mechanical Codes, and they are associated with professional industry associations and groups who train and certify their members with sound practical leading edge principles.

It is essential that professional fire protection inspection and cleaning companies direct and support their technicians to achieve higher and more founded training opportunities. Technicians who achieve, through hard work and support from their employers, professional certifications such as Certified Fire Extinguisher Service (CFESs), Certified Exhaust System Inspector (CESI) and Certified Exhaust Cleaning Specialist (CECS), or other related certifications, build confidence, gain knowledge and magnify their training in a way the competition cannot and will not match. Often, your success will be determined by what degree of confidence you have in yourself and generate with your customer. Building trust and confidence with the client is paramount!

Professional companies with solid, well-trained and certified technicians, have a better customer-to-sale ratio, generate tighter contracts with lasting clients, and demonstrate more value for service.

Through continuing sales, customer service and customer training, a client's trust and loyalty to their professional fire protection service company will not be shaken by fly-by-nights, cheaper prices, or cheaper service. However, and may I repeat, you, the certified professional must be there to support and offer customer service and training in such a way that the client will recognize, see and understand who the fly-by-nights are as they drift in for the sale. Awareness and recognition on the client's part must be based on you, what you have told them, and their trust in your honest, forthright methods. The Character of your Company and its employees is everything when it comes to successful business outcomes.

Thoughts from the Editor

"Some people wonder all their lives if they have made a difference in the world. Fire Protection Service People don't have that problem"

Winter Fire School – Industry Training

Highlights – January 11th 2013

Reducing Fire by Cleaning Exhaust Systems Seminar

Thank you to everyone who attended the Grease Exhaust System Seminar at the Utah Winter Fire Training School Friday, January 11, 2013. **Oliver C. Moore,** from the Utah State Fire Marshal's office was wonderful and in my opinion, the most gracious host I have ever had the pleasure to work with.

I had a great time presenting, teaching, and meeting everyone. I look forward to working with both Mr. Moore and the state of Utah in the future.

Thanks also go to **Jack Grace** for taking time out of his busy schedule to present the section on the new IKECA ANSI 10 standard. Jack is Chief Operating Partner at Western Commercial Services in Las Vegas and current president of IKECA.

The room was extremely full due to the unanticipated demand. We will work at getting a larger room next time. The audience was very diverse from various Inspectors, Fire Marshals, KEC vendors, Fire fighters, and even the private sector. They were a great audience with many excellent questions and observations that they shared. I hope everyone came away with a greater appreciation for what these grease fires can do and how important a proper inspection and cleaning program is.

I look forward to presenting for future seminars. Next on the public list is for the Southern MN Fire Inspectors at the Fire Department offices in Owatonna, MN on February 6. In addition, there are several additional private seminars for Restaurant Industry Management teams later this month.

~ ***Don Pfleiderer, Enviromatic***

Owners, technicians, AHJ's and others, please study this excellent training blog:

http://talesofthegreaser.blogspot.com/

"There are no such things as limits to growth, because there are no limits to the human capacity for intelligence, imagination, and wonder"

-Ronald Reagan

Certification Training Highlights "This may be on the test!"

Code requirements often change or adjust because of testing results, consumer demands, cost impacts or best practices issues. Due to laboratory test findings, NFPA adjusted it's duct velocity requirements from 1500 feet per minute (fpm) to 500 fpm. IMC followed with the same adjustment. As every experienced hood and duct inspector or cleaner knows, and a significant finding in the study was that, if there is a large temperature gradient between exhaust air inside the duct and the exterior duct wall, the rate of grease deposition increases significantly. Therefore, duct insulation should be considered where there are large temperature variations as explained.

The primary implication for this change is to reduce restaurant energy consumption by reducing exhaust airflow during idle periods, while maintaining necessary capture and containment of exhaust gases and products of combustion from the cooking surface and up and out of the kitchen. This reduces exhaust fan energy consumption and replacement air energy requirements by changing exhaust airflows during cooking and idle periods of the day. If a system is initially designed for heavier equipment and instead lighter-duty equipment is installed, exhaust airflows can be reduced without the expense of modifying ductwork. From a design perspective, it is recommended that most kitchens be designed for an in-duct velocity between 1500 and 1800 fpm. This allows for reducing the airflows to 500 fpm if needed in the future.

The combination of flammable grease and particulates; carried by kitchen ventilation systems and the potential of cooking equipment to be an ignition source creates a higher hazard level than normally found in HVAC systems. Design of an exhaust system serving cooking equipment that may produce grease-laden vapors must provide, at a minimum, a reasonable level of protection for the safety of building occupants, cooking staff and firefighters. The design can be enhanced to provide extra protection for property.

Replacement air systems, air-conditioning systems serving a kitchen, and exhaust systems serving only cooking equipment or serving any grease-producing cooking equipment must be considered a grease exhaust system even if it also serves non-grease-producing equipment.

Fire protection starts with proper operation and maintenance of the cooking equipment and the exhaust system. After that, the two primary aspects of fire protection in a grease exhaust system are (1) to extinguish a fire quickly once it has started and, (2) to prevent the spread of fire from or to the grease exhaust system.

NFPA Standard 96 requires that exhaust systems serving grease-producing equipment must include a fire-extinguishing system which must protect cooking surfaces, hood interior, hood filters or grease extractors, ducts, and any other grease-removal devices in the system. The most common fire-extinguishing system is the wet chemical and water spray systems.

The complete requirements may be found in the ASHRAE Handbook.

"There are no constraints on the human mind, no walls around the human spirit, no barriers to our progress except those we ourselves erect."

AHJ'S WHO ARE THEY AND HOW CAN THEY HELP?

Most of you now know that the soap-box subject this year has been and should continue to be… Mutualistic Fire Protection.

This is the best thing since "wonder-bread" "nylon-stocking and "happy-moment" (happy hour is gone, time flies so fast today there's no hour to spare). At any rate, if you haven't contacted your Authority Having Jurisdiction (AHJ) yet you are behind the curve, hidden by the 8-ball, floundering in the brush, your competitive edge is eroding in darkness.

Who is this guy or gal that has you languishing in the fog? The Authority Having Jurisdiction (AHJ) of course. In the state of Utah, it is the person or office charged with enforcing the fire and life safety codes. In Utah, there are many FM's. There is one in almost every city, county or community within the state. They are thick as beaver-hair, cumbersome and often hard to find and understand. Most are with the fire department, some are with the building department, others are with the health department and yet others crawl, as it were, from under the wood work or out of a greasy exhaust vent, where they have been inspecting your work.

For some occupancy types, there are more than one AHJ; each AHJ's approval must be secured. For example, the Authorities Having Jurisdiction for a hospital might include: the state fire marshal; building official; fire department fire prevention officer; state health care licensing agency; The Joint Commission; U.S. Department of Health and Human Services – Centers for Medicare and Medicaid Services (CMS); and the facility's insurance carrier. If you're unsure who the AHJ is in your area, contact your state fire marshal.

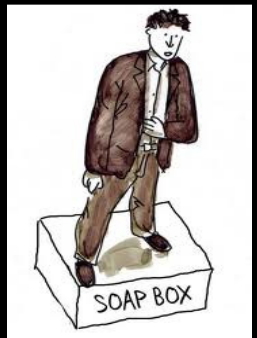
When inspections are due, our Utah AHJ's are becoming more aware of their role in commercial kitchen inspections and certainly more focused on kitchen exhaust and suppression system detail. They have expressed to me, their desire to meet and get to know you better as well.

This is a great beginning toward achieving Mutualistic Fire Protection. Remember, the first step is to create a cooperative relationship between you the service industry, and the AHJ. This first step is directed to education and training. You are helping the AHJ to better understand your work and what you do. More importantly, you help them to understand your needs and desires in relation to the work. The next step is to work together with the AHJ, to teach and educate the kitchen owner, manager, responsible parties or chef and/or their association(s). Please understand, this is a primary step. Teach them the reason, importance of your work, and of your desire to keep their commercial kitchen and restaurant safe and healthy. This can be done by (1) using any time you have with the owner or staff, to teach them, (2) Develop a forum or way to instruct their kitchen staff, (3) identify their association, journal or newsletter where safety information may be disseminated by you to their industry and (4) develop ways to build and support trust, respect and loyalty to the kitchen owners and managers and back at you.

"Look for these qualities and characteristics in people, Honesty is number one, Respect, and absolutely the third would be Loyalty." Summer Altice

It is literally true that you can succeed best and quickest by helping others to succeed.

-Napoleon Hill



The foundation stones for a balanced success are honesty, character, integrity, faith, love and loyalty.

Zig Ziglar

Strategies for Dealing with Dangerous Fire Extinguishers

Written by Emily Beach

A fire extinguisher is a device used to control or extinguish a fire. While they are often credited with saving lives and protecting property, there are also several dangers associated with fire extinguishers. These dangers should be carefully considered when developing training strategies or using an extinguisher to fight a fire.

Types

There are five different types of fire extinguishers used in the U.S. Class A models are used on paper, lumber and most home fires. Type B extinguishers work best on gasoline or combustible liquids, while Type C is designed to extinguish electrical fires. Type D is used for metal fires and Type K is designed to extinguish kitchen grease fires.

Dangers

One of the biggest dangers associated with fire extinguishers comes from using the wrong type of extinguisher to fight a fire. For example, a water extinguisher used on electrical or oil fires can cause electric shock or explosions. A Type B or C carbon dioxide extinguisher used on a chemical fire may cause violent explosions that lead to injury or death.

"I've missed more than 9000 shots in my career. I've lost almost 300 games. Twenty-six times I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed."

Michael Jordan

Stratigies for Dealing with Dangerious Fire Extinguishers...

Maintenance

Inadequate maintenance can lead to additional dangers with fire extinguishers. Units left outside or in damp areas will often corrode. A corroded fire extinguisher can explode, causing injury or death. This is a common problem in marine and industrial applications, where saltwater and chemicals cause the canisters to corrode rapidly. Failing to recharge or hydro your extinguishers can also be dangerous, as those attempting to fight a fire will find themselves ill-equipped.

Considerations

Most fire extinguishers are made of steel or some other form of metal. For those working around MRI machines, nuclear equipment or other magnetized machines, a steel fire extinguisher may be difficult or impossible to control during a fire. There is also a real risk of the steel canister being drawn towards the source of the magnet, striking people with lethal force or impacting property on the way.

Warning

Dry chemical extinguishers pose some of the biggest dangers to consumers. The fumes/dusts that are released by these units during a fire can be toxic in the short-term, and may even linger for long periods of time. Carbon dioxide can cause cold burns to operators and can deplete oxygen supplies in the room. These extinguishers also contain chemicals that may deplete the ozone layer and contribute to global warming.

References

Hanford Fire Brigade

US Fire Administration

ILPI

Always bear in mind that your own resolution to succeed is more important than any other.

Abraham Lincoln

A CODE Moment – Kitchen Systems Safe Practices

Leaks found in joints, seams, penetrations of grease ducts.

So what's the problem with a small, insignificant opening on a duct seam? With 500 feet per minute vent velocity, is there really a problem with a small penetration in a grease duct?
In answer to this question we must go camping. When we build a camp fire what is easier, twigs, sticks, kindling or a commercial fire starter, wax-stick or fire-paste. What accelerates burning? Grease, wax, hydrocarbon-laden-paste…a simple answer to a simple question.
A small pin hole in ductwork, allows months/years of grease drippings to absorb into wood joist, studs, and insulation, creating "grease-laden fire starters". With the application of heat to wood, its natural ability to resist heat oxidizes (is removed away), creating what is called pyrolysis. *"Pyrolysis is a thermochemical decomposition of organic material at elevated temperatures." Wikipedia.* This reduces natural woods self-ignition temperature to lower levels.

Heat buildup from ductwork helps to reduce self-ignition temperatures so that when a "grease fire" within the duct increases ambient temperature to the outside of the duct, pyrolyzed wood or normal organic materials self-ignite within the duct run, allowing fire to extend into the wall space or attic. Natural organic material or woods that have been laden with grease (The leak) accelerate the fire.

NFPA 96.5.1.2 *"All seams, joints, and penetrations of the hood (duct) enclosure that direct and capture grease-laden vapors and exhaust gases shall have a liquid-tight continuous external weld…"*

IMC 506.3.2.2 *"Duct-to-hood joints shall be made with continuous internal or external liquid-tight welded or brazed joints. Such joints shall be smooth, accessible for inspection and without grease traps."*

IMC 506.3.2.5 *"Prior to the use or concealment of any portion of a grease duct system, a (light test) leakage test shall be performed,"* and shall be performed, as well, should a duct leak be identified.

Reporting by properly trained, qualified personnel: NFPA 96.11.6.14 &15
When a vapor or grease leak is found in a hood or ductwork or on the exterior of the duct in the duct run or on the insulation?
"Certificates of inspection and cleaning reports of areas not cleaned (or deficient) shall be submitted to the authority having jurisdiction."

Safety is something that happens between your ears – Not something you hold in your hands.

Maintenance of the fire extinguishing systems and listed exhaust hoods (ducts) shall be made by properly trained, qualified, and certified persons(s) acceptable to the AHJ every 6 months.
NFPA 96.11.2.1

Safety

LADDERS

To successfully accomplish a kitchen exhaust system inspection or service an exhaust system through access panels or from the fan housing choosing the appropriate and safest ladder will be vital and perhaps the most important tool you carry. Safe and efficient use of ladders is not complicated or difficult but it does require that the users practice proper ladder safety habits.

THE RIGHT LADDER FOR THE JOB

Having the right ladder for the job is the safest way to complete any out-of-reach task. Using the wrong ladder is extremely dangerous as it often leads to ladder misuse or abuse and can result in serious injury or even death. Most jobs require ladders of different styles, sizes, duty strength and materials.

To start with the highest permitted standing level on a stepladder is two steps down from the top. **A person's maximum safe reaching height is approximately 4 feet higher than the height of the ladder.** For example, a typical person can safely reach an 8 foot ceiling on a 4 foot ladder.

Extension ladders should be 7 to 10 feet longer than the highest support or contact point, which may be the wall or roof line. This will allow enough length for proper setup, overlap of ladder sections, height restrictions of the highest standing level, and where appropriate, the extension of the ladder above the roof line. The highest standing level is **four (4) rungs** down from the top.

Extension Ladders

Ladder Height	Maximum Reach*	Height to Gutter or Top Support Point ††
16'	15'	9' max
20'	19'	9' to 13'
24'	23'	13' to 17'
28'	27'	17' to 21'
32'	31'	21' to 25'
36'	34'	25' to 28'
40'	37'	28' to 31'

Assumes a 5'6" person with a vertical 12" reach.
Support points for an extension ladder reflect section overlap, ladder angle, or 3' extension above the roof line.

According to the National Fire Protection Association (NFPA), the majority of restaurant fires originate on the kitchen cooking appliances and flare into the kitchen exhaust system. Regular maintenance of a restaurant's kitchen exhaust system is one of the primary defenses against fire hazards. By keeping these systems working at their best, they will evacuate the smoke and grease out of the building and produce a cleaner, cooler kitchen and better working environment for staff.

Safety – Continued…

DUTY RATINGS

The Duty Rating is defined as the maximum safe load capacity of the ladder. A person's fully clothed weight plus the weight of any tools and materials that are carried onto the ladder must be less than the duty rating. Duty Ratings are described in terms of pounds, such as 300 lbs. A Duty-Rating of Type 1A ladder, which is designed for extra heavy duty professional use, where the total weight on the ladder does not exceed 300 pounds.

LADDER SAFETY TIPS

After you have chosen the right ladder for the job, review the following:

- Ladder inspection
  - Look at damaged or missing or loose components.
  - Don't use a damaged ladder
  - Make sure all moving parts move properly
  - Check spreaders, extension locks, flippers, and safety shoes for proper operation.
- Care and maintenance
  - Keep ladders in good working order
  - Lightly lubricate moving parts
  - Protect ladders from heat, weather, and corrosives
  - Keep ladders free from spills or drips, paint, slippery oil.
- Safety Before you climb.
  - Fiberglass ladders are electrically non-conductive.
  - Water logged wooden ladders are conductive
  - Fully open and lock spreaders on stepladders.
  - Feet shall be flat and solid on a solid dry surface

LADDER SAFETY

- Ladders will be placed with a secure footing, or they will be lashed, or held in position.
- Ladders used to gain access to a roof or other area will extend at least 3 feet above the point of support.
- The foot of the ladder will, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter (1/4) of the working length of the ladder (the length alone the ladder between the foot and the support).
- The worker will always face the ladder when climbing up or down.
- Short ladders will not be spliced together to make a long ladder.
- Ladders will never be used in the horizontal position as scaffolds' or work platforms.
- The top of a regular stepladder will not be used as a step.
- Use both hands when climbing or descending ladders.
- Metal ladders will never be used near electrical equipment.

Safety Information provided by Werner Ladder Company

Nothing can stop a man with the right mental attitude from achieving his goal; nothing on earth can help the man with the wrong mental attitude.

Thomas Jefferson

Success isn't a result of spontaneous combustion. You must set yourself on fire.

Arnold H. Glasow

Having a bad day?

Burger King Fire in Belvidere (from WIFR.com)

BELVIDERE (WIFR) -- The Belvidere Burger King off U.S. 20 that went up in flames last night could soon be demolished. Owners and community members say they are devastated by the loss.
UPDATE (WIFR) -- The dinner crowd at the Belvidere Burger King had to run to safety Tuesday night after a fire started in the kitchen and spread to the building's roof.
The fire broke out around 6:30pm on Tuesday evening. Employees say there were about 8 people working at the time and about 5 people in the dining room, with a couple cars in the drive thru. Everyone got out safely, but ***the flames spread quickly from the kitchen's exhaust vents and across the attic***. The building will probably be a total loss.
"We initially made an attack interior to the vents over the stoves and were unsuccessful in putting the fire out and it spread through the attic pretty quickly and we had to go defensively at the time," says Belvidere Fire Chief David Worrell. Investigators aren't sure yet just what sparked the fire.

More information may be found - http://talesofthegreaser.blogspot.com/

The Utah State Fire Marshal's Office – 5272 South College Drive – Murray, UT

When you are courting a nice girl, an hour seems like a second.
When you sit on a red-hot cinder a second seems like an hour. That's Relativity.

Albert Einstein

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People who think they know everything are a great annoyance to those of us who do.

Isaac Asimov

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I have six locks on my door all in a row. When I go out, I lock every other one.
I figure no matter how long someone stands there picking the locks, they are always locking three.

Elayne Boosler

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A two year old is like having a blender, but you don't have the top for it.

Jerry Seinfeld