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FUSIBLE LINK

January 2020

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President's Message....

Unfortunately, mother nature prevented us from closing out 2019 and the decade with our annual holiday party in December, so we have rescheduled it for Monday January 6th, 2020 at the Hanover Manor.

There will be a wine tasting & an open bar followed by a buffet dinner. Jerry Naylis with Technical Fire Service will be making a lively presentation on Recent Large Losses in New Jersey. There will also be Baskets of Cheer raffle to benefit 'Hope for Veterans'.

I look forward to seeing you there!

NJSFPE is a sponsor at the 27th Fire Facts Seminars being held at Princeton and Seton Hall Universities on Thursday January 9th and Friday January 10th, respectively. Russ Leavitt, Telgian Corporation will be presenting NFPA 25 Water-Based Fire Protection Systems Inspection, Testing & Maintenance. You can register at cityfire.com.

Have a Firesafe New Year!!!

Paul

Chapter President

PLEASE NOTE....

December NJ Chapter meeting postponed to January 6th

Due to weather, the December chapter meeting which also included the annual chapter Holiday party, has been postponed to January 6th. Please mark your calendars and register via the following link so that food arrangements by the Hanover Manor can be more accurately planned.



SFPE
New Jersey

Invitation

NJ Chapter Holiday Party
Monday, January 6, 2020
5pm – 6pm Wine Tasting & Open Bar
(Beer, Wine & Soda)

Holiday Buffet Dinner Follows

After Dinner Speaker – Jerry Naylis
“Learning From Losses”

Plus Baskets of Cheer to Benefit Hope For Veterans
\$30 pp Register [Here](#)

HOPE FOR VETERANS
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Video Underscores Need to 'Close Before You Doze'

The following is a 6 minute video that most everyone should view at least once including friends and family. The link below will take you to the You Tube video. The article below fills in more information on the subject.

[Close Before You Doze - See the Dramatic Difference a Door Can Make](#)

OCTOBER 7, 2019

FIREHOUSE.COM NEWS

According to a new UL Firefighter Safety Research Institute "Close Before You Doze" survey, 49% of respondents believe it's safer to sleep with the door closed in the event of a fire, yet only 26% always sleep with their bedroom door closed.

As you know, UL FSRI's "Close Before You Doze" campaign reminds people to close all doors in their homes before bedtime, creating a barrier against deadly levels of carbon monoxide, smoke and flames, and potentially saving someone's life in the event of a house fire.

Recently, firefighters in Virginia saw firsthand the power of a closed door in an incredible video when they discovered a young girl shut in her bedroom as her house burned down around her. The video with helmet camera footage of this rescue can be viewed [here](#).

"This video vividly shows how this simple step can make all the difference in surviving a fire," said Fairfax County Fire and Rescue Department's Fire Chief, John S. Butler. "It reduces the temperature of the room, blocks deadly levels of carbon monoxide and gives valuable time for firefighters to arrive. Simply put, the 'it won't happen to me' approach can have significant consequences, but a closed door and working smoke alarms can be easy and effective safeguards."

Fire Prevention Week (Oct. 6-12) offers a great opportunity to absorb the lesson found in this video and to look over additional key findings from this new survey:

- One third of Americans (33%) mistakenly believe it is safer to have their bedroom door open in the event of a fire, and 40% believe rooms with open doors are more breathable in the event of a fire.
- People are changing their behavior, evidenced by an increase in Americans who sleep with the door closed because they believe it is safer in case of a fire – up to 25% in 2019 from 17% in 2018.
- When people hear the "Close Before Your Doze" message, they make real change with 91% of Americans who have seen or read about the campaign sharing that they now close the doors in their house before going to sleep.
- 59% of Americans have a fire escape plan, but 43% have reviewed it once or never at all.
- Most Americans (62%) have one to three working smoke alarms in their house, but only 23% check them once a month, the recommended frequency.

Additionally, UL FSRI is spending this week alerting people that the UL Standard for smoke alarms was recently updated to require new technology that enable alarms to better differentiate the smoke from cooking and that of an actual, potentially life-threatening fire.

Forty years ago, people had 17 minutes to escape their home in the event of a fire. Today, fire moves faster due to synthetic fabrics in furniture, lighter construction materials, and open floor plans, leaving people with less than three minutes to escape. Every one of these minutes counts and smoke alarms can give people the earliest warning possible that there's a fire, so they can get out quickly and safely.

The National Fire Protection Association (NFPA) and Consumer Products Safety Commission (CPSC) cite cooking nuisance alarms as the leading reason for a smoke alarm to be disabled. This practice is extremely dangerous as the NFPA also shares that roughly three out of five home-fire deaths occur in residences where there are no working smoke alarms.

Taking action

This Fire Prevention Week and year-round, taking note of these simple actions could save your life:

- Have working smoke alarms on every floor of your home, including in and outside every sleeping area
- Have an escape plan and practice it, know how to get out if there is a fire
- Close Before You Doze, put that barrier between you and a fire to buy precious time for help to arrive.

For information on the research behind these life-saving initiatives and more fire-safety tips, please visit [CloseYourDoor.org](https://www.closeyourdoor.org) and [SmokeAlarms.UL.org](https://www.smokealarms.ul.org).

The following is a research project that FM Global completed on limiting Oxygen levels for various commodities in a full scale fire test environment. For the purposes of this Fusible Link only the Executive Summary is being printed. The full research project report can be found at:

Go to:

<https://www.fmglobal.com/research-and-resources/research-and-testing/research-technical-reports>

Then go to the 5th bullet down and click on:

[Evaluation of Oxygen Reduction System \(ORS\) in Large-Scale Fire Tests](#)

Evaluation of Oxygen Reduction System (ORS) in Large-Scale Fire Tests

Prepared by

Xiangyang Zhou

Yibing Xin

Executive Summary

An oxygen reduction system (ORS) is a fire prevention system that uses a low-oxygen environment to reduce, if not eliminate, the potential for ignition and fire propagation in a protected space. The key parameter for ORS design is the limiting oxygen concentration (LOC), defined as the lowest O₂ concentration that can support combustion for a given fuel. However, at the low oxygen levels that are typically required, life safety concerns can be an important factor for the use of ORS.

Previous work using bench-scale testing has shown that the LOCs for common solid fuels are lower than those recommended in existing standards including VdS 3527 and EN 16750 (Draft). To further evaluate this technology, the present work focuses on large-scale fire tests to determine the effective O₂ design concentrations for ORS applications.

Large-scale fire tests were designed in this work to simulate current ORS applications in engineering practice. A two-tier fuel array of standard commodities in rack storage configuration was set up in an enclosure. A constant N₂/Air mixture flow was supplied to the enclosure at a desired oxygen concentration. The oxygen concentration was varied nominally in 2% steps from 9% up to 17%. To maintain repeatable test conditions, a premixed flame with a constant heat release rate (HRR, 33 kW) was used as the ignition source in this work. This premixed flame ignitor represents potential heat sources such as electric arc and hot work that are not sensitive to oxygen level. The HRR of the ignition source is consistent with that of two half igniters used routinely in sprinkler fire tests under normal air conditions. The tested materials included five standard commodities: Class 3, Cartoned Unexpanded Plastic (CUP), Cartoned Expanded Plastic (CEP), Uncartoned Unexpanded Plastic (UUP) and Uncartoned Expanded Plastic (UEP).

The impact of the test conditions on fire propagation was examined for Class 3 in detail at different oxygen levels. The tests showed that the oxygen concentration was the only major parameter to control fire propagation. Other test conditions, such as the flow blockage under the fuel array, the N₂/Air mixture gas flow rate, and the initial gas temperature had minor effects on fire propagation.

The limiting oxygen concentration for fire propagation was obtained for five commodities with/without a sustained igniter. The LOC was defined as an oxygen concentration at 5% probability of flame spread. The resulting values measured for different commodities in a two-tier rack storage were:

- Cartoned (Class 3, CUP and CEP) with a sustained ignitor 11.1%,
- Uncartoned (UUP and UEP) with a sustained ignitor 13.0%,
- Cartoned (Class 3, CUP and CEP) with ignitor shut off after ignition 13.8%,
- Uncartoned (UUP and UEP) with ignitor shut off after ignition 14.7%.

It should be pointed out that the LOCs obtained herein are generally lower than the O₂ design concentrations recommended by existing standards including VdS 3527 and EU prEn16750 (Draft).

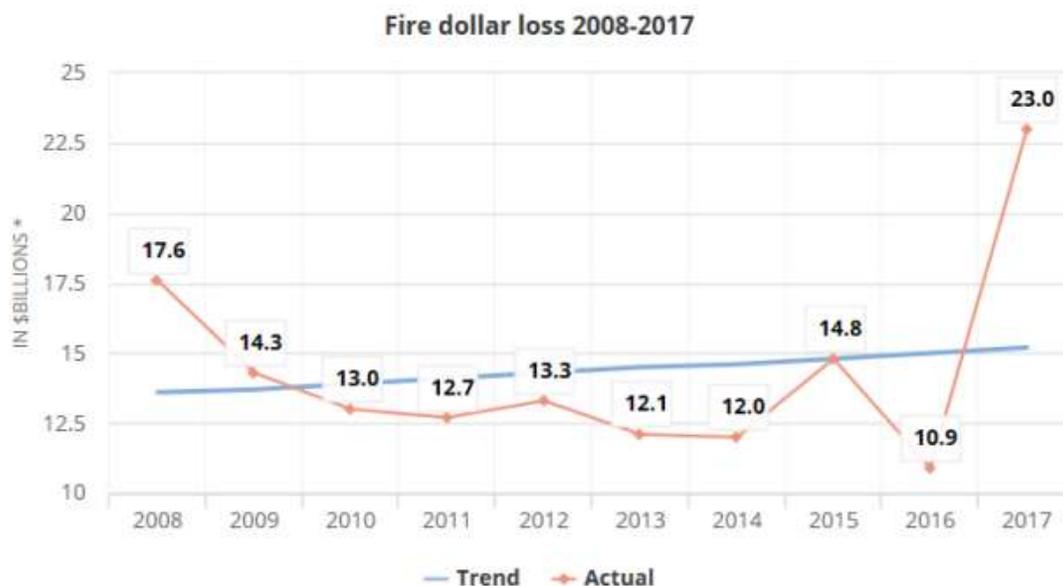
FM Global recognizes that ORS is a relatively new fire protection system which aims to maintain a steady low oxygen concentration in an enclosed protection space to control fire ignition and/or fire spread. The most important factor for the ORS to be effective is to maintain an oxygen level (LOC), below which the fire spread beyond the ignition location can be excluded. The LOC can be determined through appropriate bench-scale and large-scale tests for a specific fuel. In addition, to ensure adequate protection, systematic reliability analysis should be performed to develop the inspection, testing and maintenance (ITM) programs to provide the required availability of the system.

The results in this report and prior work illustrate that, although not a replacement for the fire sprinkler protection in general, ORS with adequate availability may be used in well-sealed and unoccupied enclosures that can consistently maintain a uniform reduced oxygen concentration. The oxygen concentration in the enclosure needs to be designed based on robust LOC fire tests and the system availability needs to be analyzed to determine ITM cycles. It is expected that the ORS satisfying these conditions can provide adequate protection with relatively low level of fire damage under certain conditions.

Trends in Fire Deaths, Injuries and Dollar Losses 2008 - 2017

			Trend
Fires	1,319,500 in 2017	-6.2% from 2008	↓
Deaths	3,400 in 2017	+9.6% from 2008	↑
Injuries	14,670 in 2017	-15.8% from 2008	↓
\$ Loss	\$23.0 billion in 2017	+12.0% * from 2008	↑

* Adjusted to 2017 dollars; includes \$10 billion in losses from Northern California wildfires.



* Adjusted to 2017 dollars

Meeting Dates/Programs 2019-2020

Most meetings are held at the Hanover Manor, 16 Eagle Rock Ave., East Hanover, NJ.
Social hour starts at 5:00PM, Dinner meeting starts at 6:00PM.

2019-2020 SFPE Program Schedule	Presenter	Date
Latest Lessons Learned from Losses	Jerry Naylis, Technical Fire Services	January 6, 2020
Cla-Val RE: Breach Valves	Bill Moore	February 3, 2020
Power over the Ethernet	Ernesto Vega Janica, IEEE	March 2, 2020
NJSFPE & AFAANJ Technical Seminar	Various Presenters	April 22, 2020
United Fire Protection Facility Tour on Special Hazards	Frank Savino, United Fire Protection	May 4, 2020
NJ-NY Metro Education Foundation Golf Outing	New York County Club	June 1, 2020
Fire Sprinkler Anti Freeze Protection	Amber Bodner, Johnson Controls Fire Protection	June 8, 2020
NFPA Conference & Expo	National Fire Protection Association	June 15-18, 2020



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2018- 2019 Chapter Committees

STANDING COMMITTEES

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Joe Janiga

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Vicki Serafin, Chairperson

Membership
Rich Reitberger

Nominating
Rich Reitberger

Auditing
Vanessa Gallagher, Chairman

Archivist/Historian
Vicki Serafin

Speakers Gifts
Rich Reitberger

Communications
Fusible Link—Brad Hart
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Lindsey Taylor—Coordinator

Communications-Other
Paul McGrath

SPECIAL COMMITTEES

Spring Seminar
Jim Loftus

Bylaws
Rich Reitberger

Career Recruitment
Tim Costello

Chapter Excellence Awards
Paul McGrath

PE Examination
Donna Spano & Marios Michaelides

Legislative
Jerry Naylis

Finance
Dave Gluckman

Fire Prevention Week Grant Program
David Gluckman

HELPFUL LINKS

ADAAG <http://www.access-board.gov/adaag/about/index.htm>

AFAA National <http://www.afaanet.org/>

AFFSA <http://www.firesprinkler.org/>

ANSI <http://web.ansi.org/>

ASHRAE <http://www.ashrae.org/>

Campus-Firewatch <http://www.campus-firewatch.com/>

Coffee Break Training <http://www.usfa.dhs.gov/nfa/coffee-break/>

CPSC <http://www.cpsc.gov/>

CSAA <http://www.csaaul.org/>

Municipal Codes (E Codes) <http://www.generalcode.com/Webcode2.html>

FDNY <http://nyc.gov/html/fdny/html/home2.shtml>

FM Global <http://www.fmglobal.com/>

FSDANY <http://www.fsdany.org/regs.htm>

FSI <http://www.firesprinklerinitiative.org/>

FSSA <http://www.fssa.net/>

Fire Tech Productions—Nicet Training (FTP) <http://www.firetech.com/>

Home Fire Spkrl Coalition <http://www.homefiresprinkler.org/>

HVAC Bld. Control Fire Safety <http://www.iklimnet.com/hotelfires/hotelfiresmain.html>

AFAA-NJ <http://www.afaanj.org/>

International Code Council - <http://www.iccsafe.org/>

International Code Council Residential Sprinkler Exam - <http://www.iccsafe.org/news/>

[nr/2009/0709_ResidentialSprinklerExam.pdf](http://www.iccsafe.org/news/nr/2009/0709_ResidentialSprinklerExam.pdf)

The Joint Commission (JCAHO) - <http://www.jointcommission.org/>

www.JointCommission.org/

Material safety data Sheets (MSDS-OSHA Site) - <http://www.osha.gov/SLTC/hazardcommunications/index.html>

National of Fire Equipment Distributors (NAFED) - <http://www.nafed.org/index.cfm>