

Session Description: A detailed overview of Grease exhaust system Design, Construction, Maintenance, and inspections along with various recommendations and inspection training. Presentation follows Current NFPA96, IKECA C10, and IBC guidelines with many real world experiences, pictures, and videos. This will also include overviews on new technologies for grease exhaust systems.

Speaker Bio: With over 41 years of experience in the Exhaust System Field (1974), Don Pfleiderer is the current president of Enviromatic Corporation. His accomplishments include various product patents and many innovative programs for grease exhaust systems. He is head of a renowned Envirospection® National



Inspection Program for kitchen grease exhaust systems for some of North America's largest restaurant chains as well as the now widely industry accepted Enviroleaktest_{tm} program for water leaktesting grease exhaust duct work. He is also an IKECA certified grease exhaust vent system cleaner (CECS #7308-09, exp 2/15/2015) and inspector (CESI #1001045, exp. 2/15/2016) and a member of the IKECA - ANSI standards consensus body for kitchen exhaust systems developing the ANAI C10 cleaning and I10 inspection standards. Mr. Pfleiderer has done numerous presentations for the past fifteen years for various Fire, Health, and Building Departments!(as well as restaurant and building trade groups) throughout Minnesota, Nebraska, Florida, New York, Massachusetts, Ohio, Kansas, Texas, Vermont, California, Utah, Wisconsin, and various other locations in the United States and Canada.

Recently, Mr. Pfleiderer has also been performing and setting up presentations, training programs, inspections, and grease exhaust

maintenance programs for various national restaurant insurance companies including Nationwide/ Allied insurance in Ohio, Missouri, and Texas, Illinois Casualty Insurance in several states, and others. Mr. Pfeleiderer has annually conducted the Minnesota Building Code Official's certification training for the University of Minnesota, the State of New York accredited training at the University of Albany, the Massachusetts's training at Holyoke, the inspector/ AHJ training at the 2011 and 2012 IKECA technical seminars in Milwaukee and Indianapolis, the 2012 Vermont/New Hampshire training in Montpillier, 2014 seminar for the CIA(Culinary Institute of America) in Hyde Park New York, the 2013 and 2014 Kitchen Exhaust training for the Utah Fire Academy, along with the 2013 and 2014 state of Wisconsin State Fire Inspectors Association training. He currently serves on education and/or ethic committees for the Minnesota Hospitality Association, IKECA, RFMA, and others. Mr Pfeleiderer was elected to the IKECA Board of Directors for 2013-2015. Mr. Pfeleiderer has also been a frequent contributing technical writer for the Restaurant Facilities Business Magazine, the RFMA Facilitator magazine, Foodservice News, and the IKECA Journal.

Course outline: (Times can be adjusted to fit schedule)

Kitchen Grease Exhaust Vent Systems: Proper installation, maintenance, and inspection.

PART 1 Maintenance and inspections (60 Minutes)

1) Cause and effect: Grease buildup causes and effects. Hidden Dangers.

- a) What is all this buildup in the ductwork and what to do about it
- b) What quality is for grease exhaust cleaning.
- c) NFPA and how ANSI standards work
- d) IKECA
- e) ANSI-IKECA C10 Cleaning standard and I10 Inspection standard update
- f) Pictures and articles on fires that resulted from inadequate cleanings.
- g) Grease Fire statistics.

2) Quick look at Standard cleaning

- a) Setup
- b) Cleaning in progress
- c) Before and after pictures of extreme buildups
- d) Proper Documentations and pictures
- e) Proper cleanup
- f) Hood and access stickers (documentation)

3) Inspections and examples

- a) NFPA96 Standards- new 2011 changes
- b) IKECA C10 Standard – Changes it brings into the ICC Codes.
- c) Insurance regulations
- d) Permit programs
- e) Looking into the systems. Why inaccessible areas cannot be allowed.
- f) Measuring the grease and the grease comb
- g) Checking hidden areas outside the duct.
- h) Checking rooftop areas and fans.
- i) Multiple examples of hidden areas found by proper inspection showing inadequate cleanings (all examples were just completed work)

4) National Inspection program proper inspection technics

- a) What is the National inspection program and how you can use the concepts?
- b) Example of a properly cleaned job that passes inspections
- c) Examples of jobs that failed inspection with inadequate pictures showing why.
- d) How the database picture inspection program works with example work orders and pictures and picture/inspection guidelines.
- e) Examples of areas of concern outside the duct covered by the inspection program including leaking ductwork above hoods
- f) How to use and integrate lessons from the National Inspection program into your own program or scope of work

PART 2 Construction, design, and new Technologies (30 minutes)

1) Type 1 systems

- a) Explanation, material use, and use.
 - b) Proper water leak testing
 - c) Examples of Non-compliant sealant use on ductwork
- 2) Type 2 systems- Why they should never be used for grease exhaust
- a) Extreme buildup in Type 2 systems
- 3) Recommended equipment and design guidelines for type 1 systems
- a) Proper access plate layouts
 - b) Option for fan hinges on side wall fans
 - c) The virtual box method for access plates
 - d) Proper and improper types of access plates
 - e) Blocked access plates
- 3) Hoods
- a) Water wash style hoods
 - b) Hood and back wall gaps and effects
 - c) Hood efficiencies
 - d) New technologies
- 4) Fans
- a) Types of fans
 - b) Proper hinges and upblast fan layouts

- c) Upblast fan clean out port requirement – updated 2011 NFPA96
 - d) Safe roof access to fans – updated 2011 NFPA96
 - e) Rooftop grease and grease containment concepts, units, and examples
 - f) Environmental units and New technologies including Electronic Precipitator example, UV filtration systems, high efficiency hood filters, etc.
 - g) EPA Regulations: Where does all that cleaning solution and grease
- Questions and Answer section- 5 minutes. Additional time can be used if available.**



Don presenting at the State of Utah Winter Fire School-2013