

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 ICC 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 43 years of experience in the Exhaust System Field(1974), Don Pfeleiderer 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 Enviropection® 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 program for water leaktesting grease exhaust duct work. He is also an IKECA certified grease exhaust vent system cleaner (CECS #7308-09, exp 6/1/2017) and inspector (CESI #11743, exp. 6/1/2018) and a member of the IKECA - ANSI standards consensus body



for kitchen exhaust systems developing the ANAI C10 cleaning and I10 inspection standards. Mr. Pfeleiderer has done numerous presentations for the past fifteen years for various Fire, Health, and Building Departments, restaurant and building trade groups, and insurance companies throughout Minnesota, Nebraska, Florida, New York, Massachusetts, Ohio, Kansas, Texas, Vermont, California, Utah, Wisconsin, and various other locations in the United States and Canada.

These include Nationwide/ Allied insurance in Ohio, Missouri, and Texas, Illinois Casualty Insurance in several states, The Aug, 2017 Boston Fire Department training(Over 200 attendees were registered from throughout New England), The Sept 2017 DFW Airport Fire Department training, The Minnesota Building Code Official's certification training for the University of Minnesota for multiple inspection department segments, The State of New York accredited training at the University of Albany, The State of 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 Montpelier, The 2014 seminar for the CIA(Culinary Institute of America) in Hyde Park New York, The 2013, 2014, and 2016 Kitchen Exhaust training for the Utah Fire Academy, along with the 2013, 2014, and 2015(and scheduled for Oct, 2017) state of Wisconsin State Fire Inspectors Association training, and the 2016 Western Colorado Fire Inspectors training. Mr Pfeleiderer currently serves on education and/or ethic committees for the Minnesota Hospitality Association, IKECA, and RFMA.

Mr Pfeleiderer was elected to the IKECA Board of Directors for 2013-2018. 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 (3 hours)

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) ICC, NFPA, and how ANSI standards work
- d) IKECA
- e) ANSI-IKECA C10 Cleaning standard and I10 Inspection standard update
- f) Mutualistic Fire Protection from Utah State Deputy Fire Marshal Oliver Moore
- g) Pictures and articles on fires that resulted from inadequate cleanings.
- h) Grease Fire statistics.

15 minute Break

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 of cleaning deficiencies

- a) NFPA96 Standards and ICC Codes- new 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) Photo inspections and how to use technologies for proper inspections.

- a) Cleaning deficiencies and tricks to spotting them.
- b) Tricks for taking and receiving proper photo verification/documentain

- c) Drawings and pictures lists to properly match pictures
- d) Access plate stickers as part of the pictures inspections(numbered)

1 hour Lunch Break

5) National Inspection program - proper inspection technics in use

- 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 (3 Hours)

1) Type 1 systems

- a) Explanation, material use, and use.
- b) Issues with improper ductwork construction
- c) Proper grease duct water leak testing procedures
- d) Water Leaktesting vs light testing with hard data over 15 years.
- e) 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
- b) Where type 2 systems are found.
- c) styles of Type 2 systems and how the codes apply or don't apply

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

15 Minute Break

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

5) Roofs

- a) Rooftop grease and grease containment concepts, units, and examples
- b) EPA Regulations: Where does all that cleaning solution and grease

6) PCU's and New Technologies

- a) Environmental units (PCU's) including Electronic Precipitator example, UV filtration systems, high efficiency hood filters, etc.
- b) New technologies including demand air systems and how they affect inspections and fire safety.

Questions and Answer section- 15 minutes. Additional time can be used if available.



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