



Extreme Weather Heating Systems

Course Outline

By

Casey O'Malley Associates & Steve Gladstone

Course description:

This one and one-half hour session will cover cold weather heating systems such as steam boilers and hot water boilers in an easy to understand format. Seasoned inspectors typically know the basic items to look for; but did you ever wonder; what actually are the specific components names and functions? What can be done to reduce noise in steam heating systems? Additionally, we will discuss modalities and evidences of failures and/or improper installations and review many actual case studies. Our emphasis will be the fundamentals of inspection standards of practice with respect to heating devices, and we will delve into improper modifications and common failures with respect to improper use, damage and just plain stupid installations.

Goal:

Upon completion of this class, students will be more knowledgeable regarding the installation, inspection and evaluation of steam and hot water boilers and the various related systems and components with application to residential inspection. Students will also be more knowledgeable regarding the appropriate conditions observed that warrant recommendation of further analysis.

Learning Objectives:

Upon completion of the course students will be able to demonstrate a working knowledge of:

1. Nomenclature specific to steam and hot water boiler installations and their relation to Home Inspection.
2. Identify components and proper installation with respect to these heating systems.
3. Identify modalities and evidences of failure; installation deficiencies, and mechanical damage related to these components.
4. Common "defects" and recognition/reporting.

Books and Handouts: PowerPoint Presentation by Steve Gladstone and Michael Casey



Evaluation: Class participation.

Class Schedule

Timing: 1.5 hours

Class Presentation: PowerPoint presentation by Michael Casey and Steve Gladstone

Timed Outline:

1. Steam Boilers 30 mins.
 - a) Oil and Gas units
 - b) One and two pipe systems
 - c) Sight glass
 - d) Hartford Loop
 - e) Low Water cutoff and water feed devices
 - f) Air vents
 - g) Pop Safety Valve
 - h) Pressure Control
 - i) Common problems such as clogged returns, nonoperational vents
2. Hot Water Boilers 30 mins.
 - a) Oil and Gas units
 - b) Typical Temperatures and Pressures
 - c) Water feed
 - d) Expansion Tanks
 - e) Circulator Pumps
 - f) Pressure Relief Valve
 - g) Immersion Coils
 - h) Common problems such as high or low pressure, air lock
3. Review of photographic case studies of steam and hot water units and common deficiencies. 30 mins.

Instructor:

Stephen Gladstone, ACI, has been inspecting homes since 1983 and is the President of Stonehollow Fine Home Inspections a multi-inspector home inspection and environmental testing company. He is licensed in CT, NY and MA. He has served as President of both the Southern New England and Coastal CT. Chapters of the American Society of Home Inspectors & was ASHI's National President in 2004. Steve was Managing Instructor and Campus Director of Kaplan Professional Schools (ITA) in New Haven & Manhattan for 6 years. And is the Managing Instructor of The "ASHI School" in Stamford. He has written many articles for local papers, has been nationally interviewed in Reader's Digest and The Wall Street Journal, featured on "Ask This Old House" tv show and many syndicated radio shows. Steve is a contributing author for the ASHI® Reporter and many other periodicals. His newest book "**The Field Guide to Home Inspections**", was published. He has produced & hosts his own Saturday morning radio show "Around the House with Steve Gladstone" in CT & NY for the past 11 years. He is a Supervisory Pest Inspector, Infrared Thermographer and Nationally Certified Radon tester. He lives in Stamford CT.