

5 BOILERS AND UNFIRED PRESSURE VESSELS

QUIZ 1 (13 POINTS TOTAL)

True/False (3 points)

1. Boilers are fired pressure vessels.
 - a. true
 - b. false
2. Blowdown piping is used to wet down excess carbon in ash pits.
 - a. true
 - b. false
3. Connect the discharge pipe to the safety valve rigidly to allow for the boiler's expansion.
 - a. true
 - b. false

Multiple Choice (2 points)

4. What organization developed the Boiler and Pressure Vessel Code?
 - a. American Society of Safety Engineers
 - b. Combustion Institute
 - c. American Society of Mechanical Engineers
 - d. American Society of Heating, Refrigerating and Air Conditioning Engineers
5. How often should a boiler be inspected during a scheduled shutdown?
 - a. three times a year
 - b. twice a year
 - c. once a year
 - d. every two years

Short Answer (7 points)

6. What is the basic cause of furnace and related boiler explosions?
7. What is a simple definition of a boiler?

8. When a boiler is taken out of service, why is prompt cleaning important?

9. How should an ash pile be wetted down?

10. What personal protective equipment should employees wear when cleaning a boiler?

11. What is high-temperature water (HTW)?

12. What usually causes equipment or piping failure in HTW systems?

Short Essay (1 point)

13. What policies should be observed to minimize low-pressure boiler fires and explosions caused by faulty controls and safety devices?

QUIZ 2 (10 POINTS TOTAL)

True/False (3 points)

1. As good piping practice, install valves and other boiler-operating controls so that they are easy to reach.
 - a. true
 - b. false
2. Each boiler room should have two or more exits, remotely located from one another.
 - a. true
 - b. false
3. The old ball-and-lever safety valve is still allowed for use in all Code states.
 - a. true
 - b. false

Multiple Choice (2 points)

4. What is the maximum pH generally recommended to prevent corrosion?
 - a. 14
 - b. 11
 - c. 8
 - d. 6.5
5. How often should operators check the safety controls?
 - a. once a month
 - b. once a week
 - c. once a day
 - d. none of the above

Short Answer (4 points)

6. What does the NB Code address?
7. What hazards can endanger workers in confined spaces like pressure vessels?

8. What is the ammonia method for detecting cracks in pressure vessels?

9. What will happen if an autoclave with pressure in it is opened?

Short Essay (1 point)

10. What should be included in a log of a pressure vessel's history?