Module 19107 Exam

Insulating Pipe Fittings, Valves, and Flanges

Trainee Name: _____

Social Security Number: _____ Date: _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. Which type of valve is used to prevent material flow in the wrong direction?
   a. Butterfly valve
   b. Balancing valve
   c. Gate valve
   d. Check valve

2. In order to trim a space for a non-flanged valve, _____.
   a. the project specifications must allow the insulation to be thinned
   b. the insulation cannot be flexible foam
   c. the insulation must be molded fiberglass
   d. a cover must be fitted over the valve

3. Insulation for a flanged valve should extend past the _____.
   a. flange body
   b. flange bolts
   c. packing gland
   d. weld

4. A fitting that is used to change the direction of a pipe by 180 degrees is a _____.
   a. return bend
   b. 90-degree ell
   c. backflow cap
   d. circular J

5. Elbows are _____.
   a. flexible joints in a pipe system
   b. the same as blind flanges
   c. fittings that change pipe direction by 90 degrees
   d. fittings that stop flow at a pipe junction

6. No-hub fittings are typically attached to cast iron pipe with _____.
   a. threaded joints
   b. flange adhesives
   c. banded clamps
   d. sweated joints

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7. PVC will begin to soften at _____.
   a. 100°F (38°C)
   b. 125°F (52°C)
   c. 150°F (66°C)
   d. 212°F (100°C)

8. Molded insulation fittings are most commonly used on _____.
   a. copper pipe
   b. ells
   c. flanges
   d. calcium carbonate

9. Fabricated segments of insulation that fit together to cover an elbow are called _____.
   a. heels
   b. overshoes
   c. custom cuts
   d. miters

$$\frac{[(2 \times \text{radius}) + \text{OD of insulation}] \times \pi}{\text{number of miters} \times 4}$$

10. Use the formula above to determine the width of each of the 4 required heel miters on an short-radius elbow on 4" pipe with an insulation OD of 8".
    a. 1.57
    b. 3.14
    c. 3.52
    d. 6.28

$$\frac{[(2 \times \text{radius}) - \text{OD of insulation}] \times \pi}{\text{number of miters} \times 4}$$

11. Use the formula above to determine the width of each of the 6 required throat miters on a long-radius elbow on 10" pipe with an insulation OD of 14". (Round your answer to the nearest two decimal places.)
    a. 1.08
    b. 2.09
    c. 2.59
    d. 4.38

12. Insulation fitted to pipe with a single miter cut are called _____.
    a. stove-pipe miters
    b. small pipe miters
    c. heel-and-throat cuts
    d. insulation bevels

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13. Insulation can be built up for fittings using _____.
    a. hydraulic setting insulation cement
    b. layered fiberglass
    c. layered insulating tape
    d. scrap insulation

14. The insulation thickness covering a flange should be _____.
    a. larger than the pipe insulation
    b. smaller than the pipe insulation
    c. dependent on the pipe system purpose
    d. the same as the pipe insulation

15. The ends of insulation at a threaded pipe union should always be _____.
    a. sealed
    b. beveled
    c. covered
    d. mitered

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