

Continuing Education from *Plumbing Systems & Design*

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Do you find it difficult to obtain continuing education units (CEUs)? Through this special section in every issue of *PS&D*, ASPE can help you accumulate the CEUs required for maintaining your Certified in Plumbing Design (CPD) status.

Now Online!

The technical article you must read to complete the exam is located at www.psdmagazine.org. The following exam and application form also may be downloaded from the website. Reading the article and completing the form will allow you to apply to ASPE for CEU credit. For most people, this process will require approximately one hour. If you earn a grade of 90 percent or higher on the test, you will be notified that you have logged 0.1 CEU, which can be applied toward the CPD renewal requirement or numerous regulatory-agency CE programs. (Please note that it is your responsibility to determine the acceptance policy of a particular agency.) CEU information will be kept on file at the ASPE office for three years.

Note: In determining your answers to the CE questions, use only the material presented in the corresponding continuing education article. Using information from other materials may result in a wrong answer.

About This Issue's Article

The January/February 2007 continuing education article is "Vent Systems," Chapter 8 of *Engineered Plumbing Design II* by A. Calvin Laws, PE, CPD.

Flow of air is the primary consideration in the design of a venting system for the ventilation of the piping and protection of the fixture trap seals of a sanitary drainage system. Since air is of such primary importance, it is essential that the plumbing engineer be familiar with certain physical characteristics that are pertinent to its behavior in a plumbing system. This chapter explains these fundamentals that are vital to the design of a vent system. It also covers vent stacks, the various types of vents and venting, the effects of suds pressure, frost closure, and vent system pressure tests.

You may locate this article at www.psdmagazine.org. Read the article, complete the following exam, and submit your answer sheet to the ASPE office to potentially receive 0.1 CEU.

CE Questions—"Vent Systems" (PSD 137)

- A wet vent is _____.**
 - not allowed by most codes
 - a vent that vents a particular fixture and at the same time serves as a waste vent to receive the discharge from other fixtures
 - not allowed to serve water closets
 - a system of individual or common vents for every trap
- The vent piping must be designed to permit the air to _____.**
 - flow freely
 - enter the piping network
 - exit the piping network
 - be compressed
- Suds, in and of themselves, _____.**
 - do not enhance the cleaning ability of soaps or detergents in any way
 - are only a problem if they are allowed to accumulate in large numbers
 - require wet venting to rinse the suds out of the drain pipe
 - none of the above
- The most expensive venting system is a _____ system.**
 - wet vent, b. continuous vent, c. circuit vent, d. loop vent
- Vapor vents _____.**
 - must be isolated from the sanitary venting system
 - may be connected through an air gap to the trap serving the fixture
 - must not be connected to the vapor vents of other types of equipment
 - all of the above
- To compensate for suds density, the vent pipe for suds relief flow must _____.**
 - not be depended on for suds protection
 - connect to each fixture trap
 - connect 10 pipe diameters from any high pressure suds zone
 - be 20 percent to 80 percent larger in diameter
- What is the primary consideration in the design of a venting system?**
 - removing odors from the sewer system
 - correctly sizing the vent piping to match the size of the waste piping
 - the flow of air in the vent system
 - none of the above
- For a given rate of discharge from a lavatory, decreasing the diameter of the drain will _____.**
 - increase the water discharge velocity from the fixture
 - decrease the water discharge velocity from the fixture
 - increase trap seal losses
 - prevent trap seal losses
- Smoke tests and peppermint air tests _____.**
 - can detect the location of a leak in a vent system
 - are no longer allowed by OSHA and the EPA
 - are not practical and seldom used
 - may not be used where frost closure is expected
- A column of air 69.23 feet high exerts the same pressure as a column of water _____ high.**
 - 1 inch, b. 10 inches, c. 100 inches, d. 1,000 inches
- A branch vent interval is _____.**
 - determined by the floor-to-floor height of the building
 - dependent on the arrangement of the fittings connecting at each floor
 - at least 8 feet between branches
 - of no importance in modern plumbing systems
- The maximum distance of a vent to a 2-inch-diameter trap is _____.**
 - 30 inches, b. 42 inches, c. 60 inches, d. 72 inches

