Equipment III
Vents

Course Objectives

1. Describe typical applications of vents in chemical processing.
2. Distinguish between the different types of vents.
3. Describe issues related to safe operation of a vent.

Key Terms (Define the following)

flame arrester - _____

_____

inerting - _____

_____

Maximum Allowable Working Pressure (MAWP) - _____

_____

relief system - _____

_____

relief header - _____

_____

Questions

1. List the potential risks of over pressure in a vessel.

_____

_____

_____

2. What is a common cause of under pressure (vacuum) in a vessel that is not designed for vacuum?

_____

_____

3. What is the purpose of a relief device such as a vent?

4. What is the difference between a free vent and a conservation vent?

5. Explain how a conservation vent may be used to reduce vacuum in a vessel.

6. A standard conservation vent will be fully open at _____ the set pressure or set vacuum.

7. What is the difference between an end-of-line vent and a pipe-away vent?

8. What is the difference between a normal vent and an emergency vent?

9. List two types of emergency vents.
   1) _____
   2) _____

10. List three requirements for vent discharge.
    1) _____
    2) _____
    3) _____

11. What is the cause of vent chatter?

12. Why is it important that a vent is inspected after an upset that releases product?