

**§ 64.27**

(b) Other than circular and stress analyzed experimentally by the method contained in UG-101 of the ASME Code.

[CGD 73-172, 39 FR 22950, June 25, 1974, as amended by CGD 84-043, 55 FR 37410, Sept. 11, 1990]

**§ 64.27 Base.**

The base of an MPT must be as wide and as long as the tank.

**§ 64.29 Tank saddles.**

If a tank is not completely supported by a framework, it must be supported by two or more external saddles, each of which extends to 120 degrees or more of the shell circumference.

**§ 64.31 Inspection opening.**

An MPT must have an inspection opening that is designed in accordance with Division 1 of section VIII of the ASME Code.

[CGD 73-172, 39 FR 22950, June 25, 1974, as amended by CGD 84-043, 55 FR 37410, Sept. 11, 1990]

**§ 64.33 Pipe connection.**

Each pipe connection that is not a pressure relief device must be fitted with a manually operated stop valve or closure located as close to the tank as practicable.

**§ 64.35 Bottom filling or discharge connection.**

If an MPT is designed with a filling or discharge connection in the bottom, the connection must be fitted with a bolted blank flange, threaded cap, or similar device to protect against leakage of the product, and a manually operated valve that is located—

- (a) Inside the tank and operated outside the tank; or
- (b) Outside the tank but as close to it as practicable.

**§ 64.37 Valve and fitting guard.**

Each valve and fitting must be protected from mechanical damage by—

- (a) The tank;
- (b) A tank saddle;
- (c) The framework; or
- (d) A guard.

**§ 64.39 Valve securing device.**

Each filling and discharge valve must have a securing device to prevent unintentional opening.

**§ 64.41 Stop valve closure.**

A stop valve that operates by a screwed spindle must close in a clockwise direction.

**§ 64.43 Lifting fittings.**

Each MPT must have attached lifting fittings so that the tank remains horizontal and stable while being moved.

**§ 64.45 Securing devices.**

An MPT or its framework must have sufficient number of positive action securing devices, including hooks, lugs, or padeyes, to attach the unit to the vessel so that—

- (a) The stress does not exceed the standard contained in § 64.15; and
- (b) Additional lashing is not needed.

**§ 64.47 Type of relief devices.**

(a) An MPT with an internal capacity of more than 550 U.S. gallons must have one or more spring loaded relief valves. In addition, a rupture disc may be attached.

(b) An MPT with an internal capacity of 550 U.S. gallons or less must have a rupture disc or a spring loaded relief valve.

**§ 64.49 Labeling openings.**

Each opening of a tank must be labeled to identify the function such as “suction”, “discharge”, “heating coil”.

**§ 64.51 Tank parts marking.**

Any part of a tank furnished by an outside supplier may not be used in a tank unless it bears—

- (a) The Coast Guard symbol;
- (b) The Marine Inspection Office identification letters;
- (c) The word “part”;
- (d) The manufacturer’s name and serial number; and
- (e) The design pressure.

**§ 64.53 Information plate for MPTs.**

(a) A corrosion-resistant metal plate containing the information in paragraph (b) of this section must be permanently attached to each MPT.

(b) Each information plate required in paragraph (a) of this section must bear the following information in legible letters  $\frac{3}{16}$  inch or more in height:

- (1) Owner's name.
- (2) Manufacturer's name.
- (3) Date of manufacture.
- (4) Serial number of tank.
- (5) Maximum allowable working pressure in psig.
- (6) Test pressure in psig.
- (7) External-pressure rating in psig.
- (8) Total capacity in gallons.
- (9) Maximum net weight in long tons.
- (10) Maximum gross weight in long tons.
- (11) Percent ullage at 122 °F.
- (12) Date of hydrostatic test.

[CGD 84-043, 55 FR 37410, Sept. 11, 1990]

#### § 64.55 Relief device location.

A pressure relief device must be located on an MPT in a place that—

- (a) Is the highest practical point of the tank; and
- (b) Allows direct communication with the vapor space.

### Subpart C—Pressure Relief Devices and Vacuum Relief Devices for MPTs

#### § 64.57 Acceptance of pressure relief devices.

A pressure relief device for an MPT must be—

- (a) From a supplier<sup>2</sup> accepted under Chapter I of Title 46, Code of Federal Regulations; or
- (b) Accepted by the Coast Guard in accordance with the procedures in § 50.25-10 of this chapter.

[CGD 84-043, 55 FR 37410, Sept. 11, 1990]

#### § 64.59 Spring loaded pressure relief valve.

A spring loaded pressure relief valve must—

- (a) Be set at a nominal pressure of 125 percent of the maximum allowable working pressure;
- (b) Have a minimum normal venting capacity that is sufficient to prevent the tank pressure from exceeding 137.5

percent of the maximum allowable working pressure;

(c) Close after discharge of a pressure not lower than 115 percent of the maximum allowable working pressure; and

(d) If closed, remain closed at any pressure less than 115 percent of the maximum allowable working pressure.

#### § 64.61 Rupture disc.

If a rupture disc is the only pressure relief device on the tank, the rupture disc must—

(a) Rupture at a pressure of 125 percent of the maximum allowable working pressure; and

(b) Have a minimum normal venting capacity that is sufficient to prevent the tank pressure from exceeding 137.5 percent of the maximum allowable working pressure.

#### § 64.63 Minimum emergency venting capacity.

(a) The total emergency venting capacity ( $Q$ ) of the relief devices of an uninsulated MPT must be in accordance with Table 1 or the following formula based upon the pressure relief device operating at a pressure not to exceed the test pressure:

$$Q = 633,000 \left( \frac{A^{0.82}}{LC} \right) \sqrt{\frac{ZT}{M}}$$

where:

$Q$ =Minimum required rate of discharge in cubic feet per minute of free air at standard conditions (60 °F and 14.7 psia).

$M$ =Molecular weight of the product, or 86.7.

$T$ =Temperature, degrees Rankine (460° + temperature in degrees F of gas at relieving temperature), or 710° Rankine.

$A$ =Total external surface area of the tank compartment in square feet.

$L$ =Latent heat of the product being vaporized at relieving conditions in Btu per pound, or 144 Btu per pound.

$Z$ =Compressibility factor of the gas at relieving conditions, or 1.0.

$C$ =Constant based on relation of specific heats, in accordance with Appendix J of Division 1 of Section VIII of the ASME Code, 1974 edition, or 315.

(b) The total emergency venting capacity ( $Q$ ) of an insulated portable tank may have a reduction if—

- (1) It is shown to the Coast Guard that the insulation reduces the heat transmission to the tank;

<sup>2</sup>Accepted suppliers are listed in CG-190, *Equipment list*.