§ 56.50–85 Tank-vent piping.

(a) This section applies to vents for all independent, fixed, non-pressure tanks or containers or for spaces in which liquids, such as fuel, ship’s stores, cargo, or ballast, are carried.

(1) The structural arrangement in double bottom and other tanks shall be such as to permit the free passage of air and gases from all parts of the tanks to vent pipes.

(2) Tanks having a comparatively small surface, such as fuel oil settling tanks, need be fitted with only one vent pipe, but tanks having a comparatively large surface shall be fitted with at least two vent pipes. The vents shall be located so as to provide venting of the tanks under any service condition.

(3) Vent pipes for fuel oil tanks shall, wherever possible, have a slope of no less than 30°. Header lines, where both ends are adequately drained to a tank, are excluded from this requirement.

(4) Tank vents must extend above the weather deck, except vents from fresh water tanks, bilge oily-water holding tanks, bilge slop tanks, and tanks containing Grade E combustible liquids, such as lubricating oil, may terminate in the machinery space, provided—

(i) The vents are arranged to prevent overflow on machinery, electrical equipment, and hot surfaces;

(ii) Tanks containing combustible liquids are not heated; and

(iii) The vents terminate above the deep load waterline if the tanks have boundaries in common with the hull.

(5) Vents from oil tanks must terminate not less than three feet from any opening into living quarters.

(6) Vents extending above the freeboard deck or superstructure deck from fuel oil and other tanks must be at least Schedule 40 in wall thickness. Except for barges in inland service and for Great Lakes vessels, the height from the deck to any point where water may gain access through the vent to below deck must be at least 30 inches (760mm) on the freeboard deck and 17½ inches (450mm) on the superstructure deck. On Great Lakes vessels, the height from the deck to any point where water may gain access through the vent to below deck must be at least 30 inches (760mm) on the freeboard deck, 24 inches (610mm) on the raised quarterdeck, and 12 inches (305mm) on other superstructure decks. Where the height of vents on Great Lakes vessels may interfere with the working of the vessel, a lower height may be approved by the Marine Safety Center if evidence is provided that a particular vent has proven satisfactory in service.

(7) Satisfactory means, permanently attached, shall be provided for closing the openings of all vents, except that barges in inland service may be exempted. Acceptable means of closure are:

(i) A ball check valve where the ball float, normally in the open position, will float up and close under the action of a submerging wave. The valve shall be designed so that the effective clear discharge area through the valve with the float in the open position is not less than the inlet area of the vent pipe to which the valve is connected.

(ii) A hinged closure normally open on the outlet of the return bend, which must close automatically by the force of a submerging wave; or

(iii) Another suitable device acceptable to the Commanding Officer, Marine Safety Center.

(8) Vent outlets from all tanks which may emit flammable or combustible vapors, such as bilge slop tanks and contaminated drain tanks, must be fitted with a single screen of corrosion-resistant wire of at least 30 by 30 mesh, or two screens of at least 20 by 20 mesh spaced not less than one-half inch
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must terminate above the weather deck.