

above the deck. An alternate arrangement consisting of a branch vent header system as required by §38.20-1 may be installed. In any case, the provisions of §38.20-1 (d) through (j) shall apply.

(b) Arrangements providing for venting cargo tanks at sea on unmanned barges will be considered by the Commandant upon presentation of plans.

§38.20-10 Ventilation—T/ALL.

(a) A power ventilation system shall be provided for compartments containing pumps, compressors, pipes, control spaces, etc. connected with the cargo handling facilities. These compartments shall be ventilated in such a way as to remove vapors from points near the floor level or bilges, or other areas where vapor concentrations may be expected. The compartments shall be equipped with power ventilation of the exhaust type having capacity sufficient to effect a complete change of air in not more than 3 minutes equal to the volume of the compartment and associated trunks.

(b) The power ventilation units shall not produce a source of vapor ignition in either the compartment or the ventilation system associated with the compartment. Inlets to exhaust ducts shall be provided and located at points where concentrations of vapors may be expected. Ventilation from the weather deck shall be provided. Ventilation outlets shall terminate away from any openings to the interior part of the vessel a lateral distance at least equal to that specified in §38.20-1(a). These outlets shall be so located as to minimize the possibility of recirculating contaminated air through the compartment.

(c) Means shall be provided for purging the following spaces of cargo vapors:

(1) The space surrounding nonpressure vessel type tanks, i.e., within the secondary barrier.

(2) The space surrounding pressure-vessel type tanks whose piping connections are below the weather deck in accordance with §38.10-1(h).

(3) The space surrounding tanks whose manhole openings are below the weather deck in accordance with §38.05-10(f).

(d) Power ventilation shall be provided for each auxiliary machinery or working space located on and accessible from the cargo handling deck. Such ventilation systems shall be designed to preclude the entry of cargo vapors into the space via the open access or the ventilation system itself.

[CGFR 66-33, 31 FR 15269, Dec. 6, 1966, as amended by CGFR 68-65, 33 FR 19985, Dec. 28, 1968]

Subpart 38.25—Periodic Tests and Inspections

§38.25-1 Tests and inspections—TB/ALL.

(a) Each tank shall be subjected to the tests and inspections described in this section in the presence of a marine inspector, except as otherwise provided in this part.

(1) An internal inspection of the tank is conducted within—

(i) Ten years after the last internal inspection if the tank is a pressure vessel type cargo tank on an unmanned barge carrying cargo at temperatures of -67°F (-55°C) or warmer; or

(ii) Eight years after the last internal inspection if the tank is of a type other than that described in paragraph (a)(1)(i) of this section.

(2) An external examination of unlagged tanks and the visible parts of lagged tanks shall be made at each inspection for certification and at such other times as considered necessary.

(3) The owner shall ensure that the amount of insulation deemed necessary by the marine inspector is removed from insulated tanks during each internal inspection to allow spot external examination of the tanks and insulation, or the thickness of the tanks may be gauged by a nondestructive means accepted by the marine inspector without the removal of insulation.

(4) If required by the Officer in Charge, Marine Inspection, the owner shall conduct nondestructive testing of each tank in accordance with §38.25-3.

(5) If the tank is a pressure vessel type cargo tank with an internal inspection interval of 10 years, is 30 years old or older, determined from the date it was built, the owner shall conduct nondestructive testing of that tank, in

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accordance with §38.25-3, during each internal inspection.

(b) If the marine inspector considers a hydrostatic test necessary to determine the condition of the tank, the owner shall perform the test at a pressure of 1½ times the tanks's—

(1) Maximum allowable pressure, as determined by the safety relief valve setting; or

(2) Design pressure, when cargo tanks operate at maximum allowable pressures reduced below the design pressure in order to satisfy special mechanical stress relief requirements.

NOTE: See the ASME Code, Section VIII, Appendix 3 for information on design pressure.

(c) For pressure vessels designed and/or supported such that they cannot safely be filled with water, the Commandant will consider a pneumatic test in lieu of the hydrostatic test. A leak test shall be performed in conjunction with the pneumatic test. Pneumatic testing shall be in accordance with subchapter F (Marine Engineering) of this chapter.

(d) Nonpressure vessel type tanks shall be tested to a pressure equal to the pressure on the bottom of the tank under the design conditions listed in §38.05-4(e).

(e) In the application of the requirements for testing of the cargo tanks, the test shall in no case be less severe than the worst anticipated service condition of the cargo loading.

(f) In the design and testing of the independent cargo tanks, consideration shall be given to the possibility of the independent tanks being subjected to external loads.

[CGFR 66-33, 31 FR 15269, Dec. 6, 1966, as amended by CGD 85-061, 54 FR 50962, Dec. 11, 1989]

§ 38.25-3 Nondestructive testing—TB/ALL.

(a) Before nondestructive testing may be conducted to meet §38.25-1 (a)(4) and (a)(5), the owner shall submit a proposal to the Officer in Charge, Marine Inspection for acceptance that includes—

(1) The test methods and procedures to be used, all of which must meet sec-

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tion V of the ASME Boiler and Pressure Vessel Code (1986);

(2) Each location on the tank to be tested; and

(3) The test method and procedure to be conducted at each location on the tank.

(b) If the Officer in Charge, Marine Inspection rejects the proposal, the Officer in Charge, Marine Inspection informs the owner of the reasons why the proposal is rejected.

(c) If the Officer in Charge, Marine Inspection accepts the proposal, then the owner shall ensure that—

(1) The proposal is followed; and

(2) Nondestructive testing is performed by personnel meeting ASNT "Recommended Practice No. SNT-TC-1A (1988), Personnel Qualification and Certification in Nondestructive Testing."

(d) Within 30 days after completing the nondestructive test, the owner shall submit a written report of the results to the Officer in Charge, Marine Inspection.

[CGD 85-061, 54 FR 50963, Dec. 11, 1989]

§ 38.25-5 Removal of defective tanks—TB/ALL.

If a tank fails to pass the tests prescribed in this subpart, it shall be removed from service unless otherwise authorized by the Commandant.

§ 38.25-10 Safety relief valves—TB/ALL.

(a) The cargo tank safety relief valves shall be inspected at least once in every 2 years.

(b) The safety relief valve discs must be lifted from their seats in the presence of a marine inspector by either liquid, gas, or vapor pressure at least once every 5 years to determine the accuracy of adjustment and, if necessary, must be reset.

[CGFR 66-33, 31 FR 15269, Dec. 6, 1966, as amended by CGD 95-027, 61 FR 26000, May 23, 1996]

PART 39—VAPOR CONTROL SYSTEMS

Subpart 39.10—General

Sec. 39.10-1 Applicability—TB/ALL.

external examination of the tanks and insulation, or the thickness of the tanks may be gauged by a non-destructive means accepted by the marine inspector without the removal of insulation.

(3) If required by the Officer in Charge, Marine Inspection the owner shall conduct nondestructive testing of each tank in accordance with § 98.25-97.

(4) If the tank is a pressure vessel type cargo tank with an internal inspection interval of 10 years, and is 30 years old or older, determined from the date it was built, the owner shall conduct nondestructive testing of each tank in accordance with § 98.25-97, during each internal inspection.

(b) A hydrostatic test of 1½ times the maximum allowable pressure as determined by the safety relief valve setting shall be made at any time that the inspector considers such hydrostatic test necessary to determine the condition of the tank. If the jacket and lagging are not removed during the hydrostatic tests prescribed in this paragraph, the tank shall hold the hydrostatic test pressure for at least 20 minutes without a pressure drop.

(c) The safety relief valves shall be popped in the presence of a marine inspector by either liquid, gas or vapor pressure at least once every four years to determine the accuracy of adjustment and, if necessary, shall be reset.

[CGFR 65-50, 30 FR 17022, Dec. 30, 1965, as amended by CGFR 67-86, 32 FR 17622, Dec. 9, 1967; CGD 85-061, 54 FR 50965, Dec. 11, 1989; USCG 1999-4976, 65 FR 6503, Feb. 9, 2000]

§ 98.25-97 Nondestructive testing.

(a) Before nondestructive testing may be conducted to meet § 98.25-95(a) (3) and (4), the owner shall submit a proposal to the Officer in Charge, Marine Inspection for approval that includes—

(1) The test methods and procedures to be used, all of which must meet section V of the ASME Boiler and Pressure Vessel Code (1986);

(2) Each location on the tank to be tested; and

(3) The test method and procedure to be conducted at each location on the tank.

(b) If the Officer in Charge, Marine Inspection rejects the proposal, the Of-

ficer in Charge, Marine Inspection informs the owner of the reasons why the proposal is rejected.

(c) If the Officer in Charge, Marine Inspection accepts the proposal, then the owner shall ensure that—

(1) The proposal is followed; and

(2) Nondestructive testing is performed by personnel meeting ASNT “Recommended Practice No. SNT-TC-1A (1988), Personnel Qualifications and Certification in Nondestructive Testing.”

(d) Within 30 days after completing the nondestructive test, the owner shall submit a written report of the results to the Officer in Charge, Marine Inspection.

[CGD 85-061, 54 FR 50965, Dec. 11, 1989]

Subpart 98.30—Portable Tanks

SOURCE: CGD 73-172, 39 FR 22954, June 25, 1974, unless otherwise noted.

§ 98.30-1 Applicability.

(a) This subpart contains regulations concerning transfer of combustible liquids, certain flammable liquids, and other hazardous materials to or from portable tanks on vessels.

(b) This subpart applies to the following portable tanks:

(1) A marine portable tank (MPT);

(2) An IM 101 or IM 102 portable tank; and

(3) A portable tank authorized for liquid hazardous materials, other than liquefied gases, by the Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration (AAHMS), under an exemption issued in accordance with subpart B of 49 CFR part 107.

[CGD 84-043, 55 FR 37411, Sept. 11, 1990, as amended by CGD 97-057, 62 FR 51046, Sept. 30, 1997]

§ 98.30-2 Definitions.

(a) *IM 101 portable tank* and *IM 102 portable tank* mean a portable tank constructed in accordance with 49 CFR 178.270 through 178.272 and approved under 49 CFR 173.32a.

(b) *MPT* means a marine portable tank that was inspected and stamped

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deemed necessary by the Officer in Charge, Marine Inspection.

(c) An external examination of unlagged tanks and the visible parts of lagged tanks is made at each biennial inspection. If the vessel has single skin construction, the underwater portion of the tank need not be examined unless deemed necessary by the Officer in Charge, Marine Inspection. If an external examination of the tank is not possible because of insulation, the owner shall ensure that—

(1) The amount of insulation deemed necessary by the marine inspector is removed during each cargo tank internal inspection to allow spot external examination of the tanks and insulation; or

(2) The thickness of the tanks is gauged by a nondestructive means accepted by the marine inspector without the removal of insulation.

(d) If required by the Officer in Charge, Marine Inspection the owner shall conduct nondestructive testing of each tank designated by the Officer in Charge, Marine Inspection in accordance with §151.04-7.

(e) If the Officer in Charge, Marine Inspection considers a hydrostatic test necessary to determine the condition of the tanks, the owner shall perform the test at a pressure of 1½ times the tank's—

(1) Maximum allowable pressure, as determined by the safety relief valve setting; or

(2) Design pressure, when cargo tanks operate at maximum allowable pressures reduced below the design pressure in order to satisfy special mechanical stress relief requirements.

NOTE: See the ASME Code, Section VIII, Appendix 3 for information on design pressure.

(f) Quick closing valves shall be tested by operating the emergency shutoff system from each operating point at the time of each vessel's inspection for certification.

(g) Excess flow valves shall be inspected at the time of inspection for certification. The Officer in Charge, Marine Inspection, shall satisfy himself that the valve is in working condition by visual inspection, and if this is impossible, by one of the following means:

(1) Removing the valve and bench testing ashore; the valve shall close at or below its rated closing flow.

(2) By any other means acceptable to the Officer in Charge, Marine Inspection, which will demonstrate that the valve is operable.

(h) Pressure vacuum relief valves shall be examined to determine that the operating mechanism is free and capable of activation.

(i) Safety relief valves shall be tested by bench testing or other suitable means. The valves shall relieve and reset within the design tolerances of the set pressure, or it shall be removed and reset prior to being returned to service. This test shall be conducted at the time of the inspection for certification.

(j) Cargo hose stored on board the vessel which is used in transferring cargoes listed in Table 151.05 shall be inspected every 2 years. This inspection shall consist of a visual examination and a hydrostatic test of 1½ times the maximum pressure to which the hose will be subjected in service. The date of the most recent inspection and the test pressure shall be stenciled or otherwise marked on the hose.

(k) Cargo piping shall be inspected and tested at the same time as the cargo tanks.

(1) If the tank is a pressure vessel type cargo tank with an internal inspection interval of 10 years, and is 30 years old or older, determined from the date it was built, the owner shall conduct nondestructive testing of each tank in accordance with §151.04-7, during each internal inspection.

[CFGR 70-10, 35 FR 3714, Feb. 25, 1970, as amended by CGD 88-100, 54 FR 40029, Sept. 29, 1989; CGD 85-061, 54 FR 50965, Dec. 11, 1989]

§ 151.04-7 Nondestructive testing.

(a) Before nondestructive testing may be conducted to meet §151.04-5 (d) and (1), the owner shall submit a proposal to the Officer in Charge, Marine Inspection that includes—

(1) The test methods and procedures to be used all of which must meet section V of the ASME Boiler and Pressure Vessel Code (1986);

(2) Each location on the tank to be tested; and

(3) The test method and procedure to be conducted at each location on the tank.

(b) If the Officer in Charge, Marine Inspection rejects the proposal, the Officer in Charge, Marine Inspection informs the owner of the reasons why the proposal is rejected.

(c) If the Officer in Charge, Marine Inspection accepts the proposal, then the owner shall ensure that—

(1) The proposal is followed; and

(2) Nondestructive testing is performed by personnel meeting ASNT “Recommended Practice No. SNT-TC-1A (1988), Personnel Qualification and Certification in Nondestructive Testing.”

(d) Within 30 days after completing the nondestructive test, the owner shall submit a written report of the results to the Officer in Charge, Marine Inspection.

[CGD 85-061, 54 FR 50966, Dec. 11, 1989]

Subpart 151.05—Summary of Minimum Requirements for Specific Cargoes

§ 151.05-1 Explanation of column headings in Table 151.05.

(a) *Cargo identification/name*. This column identifies cargoes by name. Words in italics are not part of the cargo name but may be used in addition to the cargo name. When one entry references another entry by use of the word “see” and both names are in roman type, either name may be used as the cargo name (e.g., “Diethyl ether *see* Ethyl ether”). However, the referenced entry is preferred.

(b) *Cargo identification/pressure*. This column identifies cargo in terms of pressure within the tank. Terms used are:

(1) *Pressurized*. Cargo carried at a pressure in excess of 10 pounds per square inch gauge as measured at the top of the tank (i.e., exclusive of static head).

(2) *Atmospheric pressure*. Cargo carried at not more than 10 pounds per square inch gauge, exclusive of static head.

(c) *Cargo identification/temperature*. This column identifies the cargo by the temperature of the cargo during transit.

(1) *Ambient temperature*. Cargo which is carried at naturally occurring temperatures.

(2) *Low temperature*. Cargo carried below ambient temperatures when the product temperature is below 0 °F.

(3) *Elevated temperature*. Cargo carried above ambient temperatures.

(d) *Hull type*. This column refers to the flotation features of the barge. Terms used are explained and defined in Subpart 151.10 of this part.

(e) *Cargo segregation/tanks*. This column refers to the separation of the cargo from its surroundings. Terms are explained in §151.13-5 and in footnotes to Table 151.05 of this part.

(f) *Tanks/type*. This column refers to the design requirements for cargo tanks and their placement within the hull of the vessel. Terms are explained in §151.15-1.

(g) *Tanks/venting*. This column refers to arrangements for preventing excess pressure or vacuum within the cargo tank. Terms used are explained and defined in §151.15-5.

(h) *Tanks/gauging devices*. This column refers to arrangements provided for determining the amount of cargo present in cargo tanks. Terms used are explained and defined in §151.15-10.

(i) *Cargo transfer/piping*. This column refers to the classification of piping in accordance with Subchapter F of this chapter as discussed in §151.20-1.

(j) *Cargo transfer/control*. This column refers to the valving requirements for the cargo piping system. These requirements are defined in §151.20-5.

(k) *Environmental control/cargo tanks*. This column refers to control of the composition of the environment within cargo tanks. Definitions and detailed requirements are given in §151.25-1.

(l) *Environmental control/cargo handling space*. This column refers to control of the environment in the cargo handling spaces. Definitions and detailed requirements are found in §151.25-2.

(m) *Fire protection*. This column specifies whether portable fire extinguishers are required on barges carrying the cargo named. Requirements for cargoes requiring extinguishers are given in Subpart 151.30 of this part.

(n) *Special requirements*. This column refers to requirements in subparts