Shipboard Incinerators-Requirements'' are considered to meet the requirements of IMO resolution MEPC.59(33). Incinerators in compliance with both ASTM F 1323 (incorporated by reference, see § 63.05–1), ''Standard Specifications for Shipboard Incinerators'' and Annexes A1–A3 of IMO resolution MEPC.59(33) are considered to meet the requirements of IMO resolution MEPC.59(33).

[CGD 95–028, 62 FR 51202, Sept. 30, 1997, as amended by USCG–1999–5151, 64 FR 67181, Dec. 1, 1999]

PART 64—MARINE PORTABLE TANKS AND CARGO HANDLING SYSTEMS

Subpart A—General

Subpart B—Standards for an MPT

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

Subpart D [Reserved]

Subpart E—Periodic Inspections and Tests of MPTs

Subpart F—Cargo Handling System

AUTHORITY: 46 U.S.C. 3306, 3703; 49 U.S.C. App. 1804; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGD 73–172, 39 FR 22950, June 25, 1974, unless otherwise noted.

Subpart A—General

§ 64.1 Purpose.

This part contains the requirements for—

(a) Design, construction, repair, alteration, and marking of marine portable tanks (MPTs) authorized by this chapter to be carried on inspected vessels;

(b) Periodic inspections and tests of MPTs; and

(c) Design and construction of cargo-handling systems for MPTs and other portable tanks authorized under subparts 98.30 and 98.33 of this chapter.

[CGD 84–043, 55 FR 37409, Sept. 11, 1990; 55 FR 47477, Nov. 14, 1990]

§ 64.2 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a). To enforce any edition other than the one listed in paragraph (b) of this section, the Coast Guard must publish notice of the change in the

FEDERAL REGISTER and make the material available to the public. All approved material is on file at the U.S. Coast Guard, Marine Safety and Environmental Protection, 2100 Second Street SW., Washington, DC 20593–0001, and is available from the source indicated in paragraph (b) of this section or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal__register/code__of__federal__regulations/ibr__locations.html*.

(b) The material approved for incorporation by reference in this part, and the sections affected, are:

American Society of Mechanical Engineers (ASME) International

Three Park Avenue, New York, NY 10016–5990.

ASME Boiler and Pressure Vessel Code, Section VIII, Division 1, Pressure Vessels, 1989, with Addenda issued December 31, 1989 (''ASME Code'').....64.5, 64.7, 64.11, 64.13, 64.21, 64.25, 64.31

[CGD 84–043, 55 FR 37409, Sept. 11, 1990; 55 FR 47477, Nov. 14, 1990, as amended by CGD 96–041, 61 FR 50728, Sept. 27, 1996; CGD 97–057, 62 FR 51044, Sept. 30, 1997; USCG–1999–6216, 64 FR 53225, Oct. 1, 1999]

§ 64.3 Applicability.

(a) This part applies to each MPT for which the Commanding Officer, U.S. Coast Guard Marine Safety Center, receives an application for approval on or before May 1, 1991.

(b) Subpart F of this part also applies to portable tanks and to cargo-handling systems for portable tanks authorized under subparts 98.30 and 98.33 of this chapter.

[CGD 84–043, 55 FR 37409, Sept. 11, 1990]

§ 64.5 Definitions.

As used in this part:

(a) *Marine portable tank* or *MPT* means a liquid-carrying tank that—

(1) Has a capacity of 110 gallons or more;

(2) Is designed to be carried on a vessel;

(3) Can be lifted full or empty onto and off a vessel, and can be filled and discharged while on a vessel;

(4) Is not permanently attached to the vessel; and

(5) Was inspected and stamped by the Coast Guard on or before September 30, 1992.

(b) *Tank* means the pressure vessel and the associated fittings of an MPT that come in contact with the product being carried.

(c) *Total containment pressure* means the minimum pressure for total product containment under normal operating conditions at a gauge pressure consisting of the absolute vapor pressure of the product at 122 °F added to the dynamic pressure, based on the tank dimensions and the location of the relief devices, of not less than 5 pounds per square inch gauge (psig) at the top of the tank in the operating position.

(d) *Maximum allowable working pressure* means the maximum gauge pressure at the top of the tank in the operating position at 122 °F, equal to or greater than the total containment pressure as defined in paragraph (c) of this section. The maximum allowable working pressure is used in the calculation of the minimum thickness of each element of the tank, excluding the allowance for corrosion and the thickness for loadings other than pressure, as provided for in the ASME Code.

(e) *Test pressure* means a hydrostatic pressure of at least one and one-half times the maximum allowable working pressure.

(f) *Dynamic loading conditions* means the following:

(1) A loading in the vertical down direction equal to 2 times the weight of the tank and the heaviest product carried.

(2) A loading in the transverse direction equal to the weight of the tank and the heaviest product carried.

(3) A loading in the longitudinal direction equal to the weight of the tank and the heaviest product carried.

(g) *Owner* means the person, corporation, company, partnership, or organization in which is vested the ownership, dominion, or title of a portable tank.

[CGD 73–172, 39 FR 22950, June 25, 1974, as amended by CGD 84–043, 55 FR 37409, Sept. 11, 1990]

§ 64.9 Maintenance, repair, and alteration of MPTs.

(a) Each MPT must be maintained in accordance with the approved plans, this part, and subpart 98.30 of this chapter.

(b) Repair of an MPT is authorized, provided that each repair is in accordance with the approved plans.

(c) No MPT may be altered, except with the written approval of the Commanding Officer, U.S. Coast Guard Marine Safety Center.

(d) After each welded repair or alteration, an MPT must be hydrostatically pressure-tested in accordance with paragraph (a) of § 64.83 of this part.

[CGD 84–043, 55 FR 37409, Sept. 11, 1990]

Subpart B—Standards for an MPT

§ 64.11 Design of MPTs.

An MPT must be designed—

(a) In accordance with the ASME Code and this subpart;

(b) With a maximum gross weight of 55,000 pounds;

(c) To hold a liquid cargo that has a vapor pressure of 43 pounds per square inch absolute (psia) or less at a temperature of 122 °F;

(d) With a minimum service temperature of 0 °F or higher;

(e) With a maximum allowable working pressure of not less than 20 pounds per square inch gauge (psig) but not more than 48 psig; and

(f) To withstand dynamic loading conditions applied simultaneously.

[CGD 84–043, 55 FR 37410, Sept. 11, 1990; 55 FR 40755, Oct. 4, 1990]

§ 64.13 Allowable stress; tank.

(a) The calculated stress in the tank under design conditions, including dynamic loading conditions applied simultaneously, must not exceed the allowable stress listed in Division 1 of section VIII of the ASME Code, for a design temperature of 122 °F.

(b) The calculated stress in the tank at test pressure must not exceed 75 percent of the minimum yield stress,[1] or 37.5 percent of the minimum tensile stress[1] of the material, whichever is less.

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

§ 64.15 Allowable stress; framework.

The calculated stress for the framework must be 80 percent or less of the minimum yield stress of the framework material under the dynamic loading conditions that are applied simultaneously.

§ 64.17 Minimum tank thickness.

(a) Except as allowed in paragraph (b) of this section, a tank with a diameter of—

(1) 6 feet or less must have a shell and head of 3/16 inch thickness or more; or

(2) More than 6 feet must have a shell and head of ¼ inch thickness or more.

(b) If the tank has additional framework to guard against accidental puncturing of the tank, the shell and head thickness must be ⅛ inch or more.

§ 64.19 External pressure.

(a) A tank without a vacuum breaker must be designed to withstand an external pressure of 7½ psig or more.

(b) A tank with a vacuum breaker must be designed to withstand an external pressure of 3 psig or more.

§ 64.21 Material.

The material for a tank must meet the requirements in 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]

§ 64.23 Gasket and lining.

Each gasket and lining must be made of material that is—

(a) Chemically compatible with the product for which the tank is approved; and

(b) Resistant to deterioration from the product for which the tank is approved.

§ 64.25 Cross section.

A tank must have a cross section design that is—

(a) Circular; or

[1] Listed in Division 1 of section VIII of the ASME Code.

(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 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[2] 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;

[2] Accepted suppliers are listed in CG–190, *Equipment list*.

(2) The present reduction of the emergency venting capacity (Q) is limited to the percent reduction of the heat transmission to the tank or 50 percent, whichever is less; and

(3) The insulation is sheathed.

TABLE 1—MINIMUM EMERGENCY VENTING CAPACITY IN CUBIC FEET: FREE AIR/HOUR (14.7 LB/IN^{2}A AND 60 °F)

Exposed area square feet [1]	Cubic feet free air per hour	Exposed area square feet [1]	Cubic feet free air per hour
20	27,600	275	237,000
30	38,500	300	256,000
40	48,600	350	289,500
50	58,600	400	322,100
60	67,700	450	355,900
70	77,000	500	391,000
80	85,500	550	417,500
90	94,800	600	450,000
100	104,000	650	479,000
120	121,000	700	512,000
140	136,200	750	540,000
160	152,100	800	569,000
180	168,200	850	597,000
200	184,000	900	621,000
225	199,000	950	656,000
250	219,500	1,000	685,000

[1] Interpolate for intermediate sizes.

[CGD 73–172, 39 FR 22950, June 25, 1974, as amended by CGD 84–043, 55 FR 37410, Sept. 11, 1990; 55 FR 47477, Nov. 14, 1990]

§ 64.65 Vacuum relief device.

(a) Each MPT that is designed for an external pressure of less than 7.5 psig must have a vacuum relief device.

(b) A vacuum relief device for an MPT must—

(1) Open at an external pressure of not less than 3 psig; and

(2) Have an opening with a cross-section of 0.44 square inch or more.

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

§ 64.67 Shutoff valve.

A shutoff valve may not be located—

(a) Between the tank opening and pressure relief device; or

(b) On the discharge side of the pressure relief device.

§ 64.69 Location of the pressure relief device.

A pressure relief device must be—

(a) Accessible for inspection and repair before stowage of the tank; and

(b) Attached so that escaping gas does not impinge on the tank or framework.

§ 64.71 Marking of pressure relief devices.

A pressure relief device must be plainly and permanently marked with the—

(a) Set pressure rating;

(b) Rated flow capacity expressed as cubic feet of standard air (60 °F 14.7 psia) per minute and the pressure at which the flow capacity is determined;

(c) Manufacturer's name and identifying number; and

(d) Pipe size of inlet.

Subpart D [Reserved]

Subpart E—Periodic Inspections and Tests of MPTs

§ 64.77 Inspection and test.

For the handling and stowage requirements in § 98.30–3 of this chapter, each MPT must pass the following inspections and tests conducted by the owner or the owner's representative:

(a) Pressure relief and vacuum relief devices must be inspected one time or more during each 12 month period of service in accordance with § 64.79.

(b) An MPT must be inspected during the 30 months before any month in which it is in service in accordance with § 64.81.

(c) An MPT must pass a hydrostatic test in accordance with § 64.83 during the 60 months before any month in which it is in service.

(d) After each welded repair, an MPT must pass a hydrostatic test in accordance with § 64.83.

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

§ 64.79 Inspection of pressure and vacuum relief device.

(a) The inspection of the pressure and vacuum relief device required in § 64.77(a) must include—

(1) Disassembling;

(2) A visual inspection for defective parts; and

(3) A test of the accuracy of the pressure setting.

(b) If the pressure and vacuum relief valve passes the inspection required in paragraph (a) of this section, the owner or his representative may attach to the device a metal tag containing the date of the inspection.

§ 64.81 30-month inspection of an MPT.

(a) The 30-month inspection of an MPT required in § 64.77(b) must include—

(1) An internal and external examination for—

(i) Corrosion;

(ii) Cracking of base material; and

(iii) Weld defects; and

(2) A visual inspection for defective parts and a manual operation of the gauging device, remote operating mechanism, and each valve, except the pressure relief device.

(b) If the tank passes the inspection required in paragraph (a) of this section, the owner or his representative may stencil the date of the inspection on the MPT near the metal identification plate that is required in § 64.53 in durable and legible letters that are 1¼ inch in height or larger.

§ 64.83 Hydrostatic test.

(a) The hydrostatic test required in § 64.77(c) includes—

(1) Closing each manhole and other openings by normal means of closure;

(2) Using wrenches or other tools that are used during normal operations to close the manhole and other openings;

(3) Using the same type of gaskets as used in service;

(4) If required for the inspection, removing tank insulation;

(5) Filling the tank with water and pressurizing to the test pressure indicated on the metal identification plate without leaking; and

(6) If fitted with an internal heating coil, the heating coil passing a hydrostatic test at a pressure of 200 psig or more or 50 percent or more above the rated pressure of the coil, whichever is greater.

(b) If the tank passes the hydrostatic test required in paragraph (a) of this section, the owner or his representative may stamp the date of the test and his initials on the metal identification plate required in § 64.53.

Subpart F—Cargo Handling System

§ 64.87 Purpose.

Each cargo-handling system required to satisfy § 98.30–25 or § 98.33–13 of this chapter must meet the requirements of this subpart.

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

§ 64.88 Plan approval, construction, and inspection of cargo-handling systems.

Plans for the cargo-handling system of a portable tank authorized under subpart 98.30 of this chapter must be approved by the Coast Guard in accordance with the requirements of § 56.01–10 of this subchapter. In addition, the cargo-handling system must be constructed and inspected in accordance with part 56 of this subchapter.

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

§ 64.89 Cargo pump unit.

(a) A cargo pump unit that fills or discharges a portable tank must be—

(1) Constructed of materials that are compatible with the product to be pumped; and

(2) Designed to be compatible with the hazard associated with the product to be pumped.

(b) The cargo pump power unit must be—

(1) Diesel;

(2) Hydraulic;

(3) Pneumatic; or

(4) Electric.

(c) The starting system for a cargo pump power unit must be designed to be compatible with the hazard associated with the product to be pumped.

(d) A diesel engine that is used to drive a cargo pump must have a spark arrestor on the exhaust system.

§ 64.91 Relief valve for the cargo pump discharge.

The cargo pump discharge must have a relief valve that is—

(a) Fitted between the cargo pump discharge and the shut-off valve, with the relief valve discharge piped back to the cargo pump suction or returned to the tank; and

(b) Set at the maximum design pressure of the piping and discharge hose, or less.

§ 64.93 Pump controls.

(a) A pressure gauge must be installed—

(1) On the pump discharge;

(2) Near the pump controls; and

(3) Visible to the operator.

(b) A pump must have a remote, quick acting, manual shutdown that is conspicuously labeled and located in an easily accessible area away from the pump. The quick acting, manual shutdown for remote operation must provide a means of stopping the pump power unit.

§ 64.95 Piping.

(a) Piping, valves, flanges, and fittings used in the pumping system must be designed in accordance with part 56 of this chapter.

(b) A cargo loading and discharge header or manifold must—

(1) Have stop valves to prevent cargo leakage; and

(2) Be visible to the operator at the cargo pump controls.

(c) Each pipe and valve in the pumping system that has an open end must have a plug or cap to prevent leakage.

(d) Each hose connection must be threaded or flanged except for a quick connect coupling that may be specifically accepted by the U.S. Coast Guard in accordance with the procedures in § 50.25–10 of this chapter.

(e) A non-return valve must be in the pump discharge if a backflow condition may occur during pumping.

(f) Any non-metallic flexible hose that is used in the piping system must comply with § 56.60–25(c) of this chapter.

[CGD 73–172, 39 FR 22950, June 25, 1974, as amended by USCG–2004–18884, 69 FR 58346, Sept. 30, 2004]

§ 64.97 Cargo hose.

Each hose assembly, consisting of couplings and a hose that has an inside diameter—

(a) Larger than three inches, must meet the requirements in 33 CFR 154.500; or

(b) Three inches or less, must be designed to withstand the pressure of the shutoff head of the cargo pump or pump discharge relief valve setting, but not less than 100 pounds per square inch.

INDEX

SUBCHAPTER F—MARINE ENGINEERING

EDITORIAL NOTE: This listing is provided for informational purposes only. It is compiled and kept current by the U.S. Coast Guard, Department of Homeland Security. This index is updated as of October 1, 2006.

Part, subpart, or section

A

B

C

D

E

F

G

H

Subchapter F Index

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

SUBCHAPTER G—DOCUMENTATION AND MEASUREMENT OF VESSELS

PART 66 [RESERVED]

PART 67—DOCUMENTATION OF VESSELS

Subpart A—General

Subpart B—Forms of Documentation; Endorsements; Eligibility of Vessel

Subpart C—Citizenship Requirements for Vessel Documentation

Subpart D—Title Requirements for Vessel Documentation

Subpart E—Acceptable Title Evidence; Waiver

Subpart F—Build Requirements for Vessel Documentation

Subpart G—Tonnage and Dimension Requirements for Vessel Documentation

Subpart H—Assignments and Designations Required for Vessel Documentation

Subpart I—Marking Requirements for Vessel Documentation