

Issued at Washington, D. C., this 6th day of January 1950.

[SEAL] S. R. SMITH,
Director,
Fruit and Vegetable Branch.

[F. R. Doc. 50-259; Filed, Jan. 10, 1950;
8:58 a. m.]

**PART 989—HANDLING OF RAISINS PRODUCED
FROM RAISIN VARIETY GRAPES GROWN
IN CALIFORNIA**

ADMINISTRATIVE RULES AND REGULATIONS

Sec.

989.101 Definitions.
989.104 Regulation.
989.105 Reports and records.

AUTHORITY: §§ 989.101 to 989.105 issued under 48 Stat. 31, as amended; 7 U. S. C. 601 et seq.; 14 F. R. 5136.

Findings and determinations. Pursuant to the provisions of Marketing Agreement No. 109 and Marketing Order No. 89 (14 F. R. 5136) regulating the handling of raisins produced from raisin variety grapes grown in California, hereinafter referred to as the "order," effective under the Agricultural Marketing Agreement Act of 1937, as amended (7 U. S. C. 601 et seq.), hereinafter referred to as the "act," the Raisin Administrative Committee, (the administrative agency for operations under such order) has adopted and requests the Secretary of Agriculture to approve the rules and regulations, hereinafter set forth, which rules and regulations it is hereby found and determined effectuate the terms and provisions of the order and permit the committee to obtain such other information as is necessary to enable it to exercise its powers and perform its duties under the order.

It is hereby found that it is impracticable, unnecessary, and contrary to the public interest to give preliminary notice, engage in public rule-making procedure, and postpone the effective date of the rules and regulations in this part until 30 days after publication in the *FEDERAL REGISTER* (see section 4 of the Administrative Procedure Act, 5 U. S. C. 1001 et seq.) in that (1) the production and marketing of the current crop of raisins already has begun and these rules and regulations are necessary for immediate use in regulating the handling of such raisins, (2) the order first became effective on August 18, 1949, and these rules and regulations have been drafted as soon as it was practicable to do so thereafter, (3) handlers are generally familiar with these rules and regulations, (4) compliance with these rules and regulations will not require any special preparation on the part of the persons subject thereto which cannot be completed on or before the effective date hereof, (5) a reasonable time is permitted in the circumstances for such preparation, and (6) these rules and regulations must be made effective on the date hereinafter set forth to effectuate the provisions of the order, any regulations issued thereunder, and the declared policy of the act.

The rules and regulations are as follows:

§ 989.101 Definitions. (a) "Order" means Marketing Agreement No. 109 and Order No. 89 regulating the handling of raisins produced from raisin variety grapes grown in California (14 F. R. 5136).

(b) Other terms used herein shall have the same meaning as when used in the order.

§ 989.104 Regulation—(a) Deferment of obligation. (1) Any handler who desires to defer the meeting of his reserve and surplus tonnage obligations pursuant to § 989.4 (e) (3) of the order shall file with the committee a certified application on Form RAC 201, "Application for Deferment of Reserve and Surplus Obligation," containing the following information:

(i) The date and the name and address of the handler;

(ii) The period for which deferment is requested;

(iii) The total reserve and the total surplus tonnage on which deferment is requested, by varietal type;

(iv) The name and address of each person with whom he has free tonnage under contract, undelivered, together with the amount of free tonnage thus under contract with each such person; on request, the Committee, in its discretion, may waive submission of this information;

(v) A full description of the surety bond offered; and

(vi) The reasons why deferment is desired.

(2) The committee shall promptly notify the applicant of its decision with regard to his application, including the amount of the bond required by the terms of the order if his application is approved. No handler shall use such reserve or surplus tonnage raisins as free tonnage raisins until he shall have received written approval of his application from the committee and shall have filed the required bond with the committee.

(b) **Weighted average price report.** Upon request of the committee, a handler shall file with the committee, within five days thereafter (exclusive of Saturdays, Sundays, and legal holidays), a certified report on Form RAC 104, "Report of Weighted Average Prices Paid," containing such of the following items of information as the committee may specify in its request: (1) the date and the name and address of the handler, and period covered by the report; (2) the total free tonnage of raisins of each varietal type acquired by the handler from producers and dehydrators during the crop year to a date specified by the committee, which shall be as close as practicable to the date of the request and, in any event, shall include the month preceding the date of such request; and (3) the weighted average price paid by the handler for free tonnage of each varietal type.

(c) **Substitution for Layer Muscats.** A handler who substitutes natural (sun-dried) Muscat or Valencia raisins for Layer Muscat raisins, as provided in

§ 989.4 (h) of the order, shall report to the committee within seven days (exclusive of Saturdays, Sundays, and legal holidays) after making such substitution, the fact of such substitution, the name of the producer of the Layer Muscat raisins for which the substitution was made, and the quantity of such Layer Muscat raisins. He shall obtain a written statement from the producer evidencing agreement to the substitution and shall retain it for a period of one year from its date.

(d) **Damaged raisins.** If the committee reaches the conclusion (which is confirmed by the Secretary) that a portion of the raisin production in any crop year has been damaged substantially by rain or other natural causes, raisins so damaged may be handled in the manner hereafter provided in lieu of that provided by the order for undamaged raisins.

The handler of such raisins, when filing on Form RAC 1, "Acquisition Report", a report of his acquisition thereof, shall identify such raisins as "damaged by _____" and shall describe the cause of such damage and state that the raisins are offered to the committee and held for disposition by it. Such raisins, from the time of their acquisition by the handler, shall be held by him separate and apart from all undamaged raisins acquired by him until the Committee advises otherwise. Upon receipt of the report the committee shall decide whether such raisins have been damaged by rain or other natural causes, and accept them, or have not been so damaged, and reject them, and shall promptly notify the handler of its conclusion.

If such raisins are rejected, they shall thereafter be subject to the provisions of the order and not be entitled to the benefits provided by this section.

If such raisins are accepted, they shall be excluded from any determination of surplus, reserve, or free tonnage. They shall be disposed of and accounted for by the committee in the same manner in which surplus tonnage is disposed of and accounted for except that they shall be free of the grade restrictions applicable to surplus tonnage, they may be sold by the committee for any purpose (other than for human consumption as raisins), and the net proceeds and the distribution thereof shall be determined separate from any other proceeds or distribution.

§ 989.105 Reports and records—(a) Reserve and surplus tonnage. The certified weekly report prescribed by § 989.5 (b) of the order shall be submitted on Form RAC 1, "Acquisitions Report;" it shall state the information required by that section separately by varietal type of raisins and, in addition, shall contain the following information and materials:

(1) The handler's name and address, the date of the report, identification of the week to which it relates;

(2) Copies of all weight certificates, door tags or receipts, or other evidences of weight, pertaining to the raisins acquired during the reporting week; such copies shall account for all of such acquired raisins, shall show and be segregated by the varietal type of

raisins covered thereby, and shall show the name and address of each person from whom the raisins were acquired and the quantity of each varietal type acquired from each such person; and the certification of the report shall apply to these documents. Adding machine tapes, showing total acquisitions of each varietal type of raisin, should be submitted with these documents if they are available. If any of such documents are subsequently corrected, a notice of correction, identified as such, shall accompany the report for the week in which correction was made; and

(3) A list, kept current, showing the names and addresses of all persons from whom the handler has acquired raisins during the current crop year.

The materials specified in subparagraphs (2) and (3) of this paragraph, need not be submitted by nonprofit cooperative agricultural marketing associations.

(b) *Monthly shipments.* Not later than the fifth day of each month each handler shall file with the committee a certified report on Form RAC 2, "Monthly Shipments", containing, in respect to the preceding month, the following information:

(1) The quantity of raisins shipped or otherwise disposed of by such handler, separately stated for each varietal type. The first report submitted during the crop year 1949-50 shall be cumulative and show all shipments and dispositions during that crop year through the last month covered by the report or, alternatively, it shall be accompanied by a report for each of the earlier months of that crop year.

(c) *Sales.* Upon request of the committee, a handler shall file with the committee within 10 days (exclusive of Saturdays, Sundays, and legal holidays) a signed report on Form RAC 101, "Report of Sales," containing such of the following items of information as the committee may specify in its request:

(1) The date and the name and address of the handler, and the period covered by the report;

(2) The total tonnage of raisins sold or actually contracted for sale by the handler during the crop year to a date specified by the committee, which shall be as close as practicable to the date of the request, and, in any event shall include the month preceding the date of the request;

(3) The total tonnage sold in domestic markets;

(4) The total tonnage sold in export markets; and

(5) The total tonnage sold to government agencies.

(d) *Shipments or dispositions.* Upon request of the committee, a handler shall file with the committee within 10 days (exclusive of Saturdays, Sundays, and legal holidays) a signed report on Form RAC 102, "Report of Shipments," containing such of the following items of information as the committee may specify in its request:

(1) The date and name address of the handler, and the period covered by the report; and

(2) The total tonnage of raisins shipped or otherwise disposed of by the handler during the period of the report, segregated as to commercial foreign export outlets, Commodity Credit Corporation purchases, other government agency purchases, and other shipments or dispositions, all stated separately as to consumer packs and bulk.

(e) *Carryover and marketing policy information.* Upon request of the committee, a handler shall within 10 days (exclusive of Saturdays, Sundays, and legal holidays) file with the committee a signed report on Form RAC 103, "Report of Carryover and Marketing Policy Information," containing such of the following items of information in respect to each varietal type of raisins as may be requested by the committee:

(1) The tonnage of raisins held by the handler, separately stated as free, reserve or surplus tonnage, as of the date specified in the committee's request.

Issued at Fresno, California, this 8th day of December 1949, to be effective on and after 12:01 a. m., P. s. t., January 13, 1950.

RAISIN ADMINISTRATIVE
COMMITTEE,
A. SETRAKIAN,
Chairman.

[SEAL]

Approved this 6th day of January 1950.

CHARLES F. BRANNAN,
Secretary of Agriculture.

[F. R. Doc. 50-230; Filed, Jan. 10, 1950;
10:02 a. m.]

TITLE 24—HOUSING AND HOUSING CREDIT

Chapter VIII—Office of Housing Expediter

[Controlled Housing Rent Reg., Amdt. 204,
Corr.]

[Controlled Rooms in Rooming Houses and
Other Establishments Rent Reg., Amdt.
203, Corr.]

PART 825—RENT REGULATIONS UNDER THE HOUSING AND RENT ACT OF 1947, AS AMENDED

PENNSYLVANIA

Item 7 of Amendment 204 to the Controlled Housing Rent Regulation (§§ 825.1 to 825.12¹) and of Amendment 203 to the Rent Regulation for Controlled Rooms in Rooming Houses and Other Establishments (§§ 825.81 to 825.92¹), issued December 29, 1949, and effective January 3, 1950, is corrected to read as follows:

7. Schedule A, Item 258, is amended to describe the counties in the Defense-Rental Areas as follows:

In Blair County, the City of Altoona, and the Townships of Allegheny, Antis, Blair, Frankstown, Logan and Snyder, and the Boroughs of Bellwood, Duncansville, Hollidaysburg, Newry and Tyrone; Cambria County; and in Somerset County, the Townships of Black, Conemough, Jenner, Lincoln, Ogle, Paint, Shade, Somerset, Summit and

¹ 14 F. R. 7884.

Quemahoning, and the Boroughs of Benson, Boswell, Central City, Hooversville, Garrett, Jennerstown, Meyersdale, Paint, Rockwood, Somerset, Stoyestown and Windber.

This decontrols all of Blair County, Pennsylvania, a portion of the Altoona-Johnstown, Pennsylvania, Defense-Rental Area, except for the City of Altoona, Pennsylvania, and the townships and boroughs listed above.

This correction shall be effective as of January 3, 1950.

Issued this 6th day of January 1950.

TIGHE E. WOODS,
Housing Expediter.

[F. R. Doc. 50-240; Filed, Jan. 10, 1950;

8:54 a. m.]

TITLE 49—TRANSPORTATION

Chapter I—Interstate Commerce Commission

PART 120—ANNUAL, SPECIAL OR PERIODICAL REPORTS

STEAM RAILWAY ANNUAL REPORT FORM A

At a session of the Interstate Commerce Commission, Division 1, held at its office in Washington, D. C., on the 28th day of December A. D. 1949.

The matter of annual reports from Steam Railway Companies and Switching and Terminal Companies of Class I and Class II being under consideration:

It is ordered, That the order dated January 5, 1949, in the matter of annual reports from steam railway companies and switching and terminal companies of Class I and Class II (49 CFR 120.11) be, and it is hereby modified with respect to annual reports for the year ended December 31, 1949, and subsequent years, as follows:

§ 120.11. *Form prescribed for large and medium steam railways.* All steam railway companies and switching and terminal companies of Class I and Class II subject to the provisions of section 20, Part I, of the Interstate Commerce Act, are hereby required to file annual reports for the year ended December 31, 1949, and for each succeeding year until further order in accordance with Annual Report Form A (Large and Medium Steam Roads and Switching and Terminal Companies),¹ which is hereby approved and made a part of this order. The annual report shall be filed, in duplicate, in the Bureau of Transport Economics and Statistics, Interstate Commerce Commission, Washington 25, D. C., on or before March 31, of the year following the one to which it relates.

(24 Stat. 886, as amended; 49 U. S. C. 20 (1)-(8))

NOTE: Budget Bureau No. 60-R098.6.

By the Commission, Division 1.

[SEAL]

W. P. BARTEL,
Secretary.

[F. R. Doc. 50-226; Filed, Jan. 10, 1950;
8:50 a. m.]

¹ Filed as a part of the original document.

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 49-43]

MISCELLANEOUS AMENDMENTS TO CHAPTER

A notice regarding proposed changes in the inspection and navigation regulations was published in the *FEDERAL REGISTER* dated August 23, 1949, 14 F. R. 5230, and a public hearing was held by the Merchant Marine Council on September 27, 1949, at Washington, D. C.

The purpose of the miscellaneous amendments to the regulations is to clarify their intent, effect editorial changes, and establish additional safety requirements.

The changes in the motorboat regulations impose a new requirement that a licensed motorboat operator shall carry his license on board a motorboat at all times when the boat is carrying passengers for hire, as well as to transfer specification requirements for wood floats to another subchapter and change requirements for fuel supply shut-off devices and fuel tanks of motor vessels of more than 15 gross tons carrying passengers for hire.

The amendments to regulations regarding line-throwing appliances and equipment provide that certain vessels carry an impulse-projected rocket type line-throwing appliance and that other vessels may carry a shoulder gun line-throwing appliance while the Lyle gun type line-throwing appliance may be continued in use only on vessels now so equipped with that type.

The amendments regarding fire-extinguishing systems will require a water sprinkling fire-extinguishing system on vessels carrying combustible cargo in holds or other closed compartments from which inert gas or steam could escape and render crew or passenger spaces uninhabitable if inert-gas or steam extinguishing systems were installed.

The amendments to the dangerous cargo regulations revise the requirements for portable magazine chests used for the stowage of certain explosives, change shipping requirements for pyroxylin plastics and film support (nitrocellulose base) to agree with requirements of the Interstate Commerce Commission, change the shipping requirements for the transportation of iron sponge not properly oxidized, iron mass, spent, iron sponge, spent, iron oxide, iron mass, wet, iron sponge, wet, and iron oxide, wet, as well as to permit the use of more than 30 pounds per square inch air pressure when discharging bulk cargoes of sulfuric acid.

The amendments to Subchapter Q—*Specifications* provide new and revised requirements for manufacturing buoyant apparatus, hatchets, embarkation-debarkation ladders, life rafts, life floats, shoulder gun type line-throwing appliances, portable magazine chests, wood floats, impulse-projected rocket type line-throwing appliances, floating electric lights, motor lifeboat searchlights, and hand electric flashlights.

By virtue of the authority vested in me as Commandant, United States Coast

Guard, by R. S. 4405, as amended, and section 101 of Reorganization Plan No. 3 of 1946, 46 U. S. C. 1, 375, as well as the statutes cited with the regulations below, the following amendments to the regulations are prescribed which shall become effective ninety (90) days after date of publication of this document in the *FEDERAL REGISTER*:

Subchapter C—Motorboats and Certain Vessels Propelled by Machinery Other Than by Steam More Than 65 Feet in Length

PART 24—GENERAL PROVISIONS

Part 24 is amended by adding a new section reading as follows:

§ 24.12 *Exhibition of motorboat operator's license.* Any person to whom a license as a motorboat operator has been issued shall have such license in his possession and available for immediate production to any Coast Guard boarding officer at all times during which any vessel which he is operating is carrying passengers for hire. (54 Stat. 163-167, 46 U. S. C. 526-526t)

PART 25—REQUIREMENTS FOR ALL MOTORBOATS EXCEPT THOSE OF OVER 15 GROSS TONS CARRYING PASSENGERS FOR HIRE

LIFE PRESERVERS OR OTHER LIFESAVING DEVICES

Section 25.4-3 is amended to read as follows:

§ 25.4-3 *Commercial fishing motorboats—wood floats.* Commercial fishing motorboats shall be allowed to use wood floats, one for each person on board, which shall be constructed in accordance with subpart 160.039 of Subchapter Q of this chapter. (54 Stat. 163-167, 46 U. S. C. 526-526t)

PART 27—REQUIREMENTS FOR MOTORBOATS AND MOTOR VESSELS OF MORE THAN 15 GROSS TONS CARRYING PASSENGERS FOR HIRE

INSTALLATION REQUIREMENTS FOR VESSELS USING LIQUID FUELS STORED AT ATMOSPHERIC PRESSURE AND TEMPERATURE AND HAVING FLASH POINTS OF 110° F. OR LOWER

1. Section 27.4-2 (j) is amended to read as follows:

§ 27.4-2 *Fuel tanks and piping.* * * *

(j) *Shut-off valves.* Shut-off valves shall be installed in the fuel line; one as close to each tank as practicable, and one as close to each carburetor as practicable. Arrangements shall be provided for operating all shut-off valves at the tanks from outside the compartments in which they are located, preferably from an accessible position on deck. The operating gear for the shut-off valves at the tanks shall be accessible at all times and in efficient working condition. (54 Stat. 163-167, 46 U. S. C. 526-526t)

INSTALLATION REQUIREMENTS FOR VESSELS USING LIQUID FUELS STORED AT ATMOSPHERIC PRESSURE AND TEMPERATURE AND HAVING FLASH POINTS ABOVE 110° F.

2. Section 27.5-2 (a) is amended to read as follows:

§ 27.5-2 *Fuel tanks and piping.* * * *

(a) *Fuel tanks.* Fuel tanks shall be constructed and tested in conformance with § 27.4-2 (c), except that internal galvanizing may be omitted in independent tanks. (54 Stat. 163-167, 46 U. S. C. 526-526t)

Subchapter G—Ocean and Coastwise: General Rules and Regulations

PART 59—BOATS, RAFTS, BULKHEADS, AND LIFESAVING APPLIANCES (OCEAN)

1. Section 59.60 is amended to read as follows:

§ 59.60 *Line-throwing appliances—*

(a) *Requirements.* All passenger vessels (regardless of tonnage or manner of propulsion) engaged on international voyages, all ocean cargo steam vessels of 500 gross tons and over, and all seagoing motor-propelled vessels of 500 gross tons and over, carrying cargo or passengers or both, shall be equipped with an approved line-throwing appliance, and equipment auxiliary thereto, of the impulse-projected rocket type, the requirements for which are set forth in subpart 160.040 of Subchapter Q of this chapter. All ocean cargo steam vessels of 150 gross tons and over and less than 500 gross tons, and all seagoing motor-propelled vessels of 300 gross tons and over and less than 500 gross tons, carrying cargo or passengers or both, shall be equipped with an approved line-throwing appliance, and equipment auxiliary thereto, of the shoulder gun type or the impulse-projected rocket type, the requirements for which are set forth in subparts 160.031 and 160.040, respectively, of Subchapter Q of this chapter. Service use of rockets shall be within four years from date of manufacture. Lyle gun type line-throwing appliances already in service on merchant vessels may be continued in use so long as in good and serviceable condition: *Provided*, That any replacements shall be made with a line-throwing appliance of the impulse-projected rocket type or shoulder gun type, as applicable.

(b) *Accessibility.* The line-throwing appliance and its equipment shall be kept always easily and immediately accessible and ready for use. No part of this equipment shall be used for any other purpose.

(c) *Drills.* The master of a vessel equipped with a line-throwing appliance shall drill his crew in its use and require it to be fired at least once in every 3 months. Each drill shall be recorded in the ship's log book. The service line shall not be used for drill purposes. The drills shall be conducted as follows:

(1) For impulse-projected rocket type, by actually firing the rocket with any ordinary line of proper length attached; or,

(2) For shoulder gun type, by actual firing, using the regular cartridge and projectile with any ordinary line of proper length; or,

(3) For Lyle gun type on existing vessels, by actual firing, using one-half the usual charge of powder with regular service projectile and any ordinary line of proper length.

(d) *Service recommendations.* The following precautions and procedure are recommended for the use of line-throwing appliances and equipment:

(1) *Impulse-projected rocket type.* Follow the operating instructions and safety precautions furnished by the manufacturer.

(2) *Shoulder gun type.* Follow the operating instructions and safety precautions furnished by the manufacturer.

(3) *Lyle gun type on existing vessels.* (i) Service powder charge should be about 5 ounces of black powder, and the powder bags should be furnished to the vessel containing 2½ ounces of black powder and marked "one-half normal charge". Under extraordinary circumstances, 7½ ounces (three 2½-ounce bags) of black powder may be used.

(ii) In making the line fast to the shank, pass it through the eye and take three or more half-hitches around its own part, leaving a loop of about 10 or 12 inches and taking the hitches about 6 inches apart. This will allow the line to slip slightly through the eye of the shank before the hitches fetch up, thus easing the strain on the line at the loop during the initial acceleration.

(iii) A considerable bight led over the side is recommended wherever possible, as it will tend to lessen the jerk on the line at initial acceleration.

(iv) At least a fathom of the line from the shank should be thoroughly wet before using to prevent burning.

(v) The faking box or reel should always be faced in the direction of the line of fire and placed abreast of the gun and as close to ship's side as possible. It is not advisable to place the line too close to the muzzle of the gun, as the concussion may lift several layers or coils from the top, causing a snarl which in turn may cause the line to part.

(vi) Care should be taken in placing the equipment to prevent fouling of the line in rigging, ridge ropes, etc., which have a tendency to rise or jump up when the gun is fired.

(vii) Having made the gun and equipment ready for use, the following procedure in firing is recommended: Select a place where the gun may recoil without striking anything, or where it may be securely lashed down. Note the position of the vessel to be relieved, and the direction and approximate force of the wind, and then place the gun in position, making allowance for the drift of the line. Place the line on the windward side of the gun and about 3 feet from it. Make the line fast in the eye of the shank and insert the powder charge, projectile, and primer. In loading, make sure that the projectile is seated against the wad.

(viii) After using, the line should be thoroughly dried before rewinding or faking. (R. S. 4405, 4426, 4488, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 404, 481, 1333, 50 U. S. C. 1275)

2. Section 59.61 is amended to read as follows:

§ 59.61 *Equipment for line-throwing appliances.* The equipment enumerated below is required to be carried with the

various types of line-throwing appliances:

(a) *Impulse-projected rocket type.* Four (4) rockets (2 of which shall be of the buoyant type), 4 primer-ejector cartridges, 4 service lines (each 1,000 feet of ½-inch to ¾-inch diameter flax or manilla, having not less than 500 pounds breaking strength, in faking boxes or reels), 1 can of oil, 1 cleaning brush, 12 wiping patches, and 1 set of instructions furnished by the manufacturer, all in a suitable case or box with the appliance, with the auxiliary line (1,500 feet of 3-inch circumference manilla) accessible for use either in the case or nearby.

(b) *Shoulder gun type.* Ten (10) service projectiles, 4 service lines (each 400 feet of ¾-inch circumference flax or cotton line, having not less than 250 pounds breaking strength, in faking boxes or reels), 25 cartridges, 1 cleaning rod with brush, 1 can of oil, 12 wiping patches, and 1 set of instructions, all in a suitable case or box with the gun, with an auxiliary line (500 feet of 3-inch circumference manilla) accessible for use.

(c) *Lyle gun type on existing vessels.* Six (6) service projectiles, 4 service lines (each 1,700 feet of ¾-inch to 1-inch diameter flax or manilla, having not less than 500 pounds breaking strength, in faking boxes or reels), 1 auxiliary line (1,500 feet of 3-inch circumference manilla), 1 approved firing attachment (with accessories consisting of lanyard, wrench, washer to fit between barrel and shoulder of firing attachment, blank plug for screwing into gun when firing attachment is not in place, cartridge extractor, and 25 primers in watertight metal box), 18 bags (2½ ounces each) of black powder marked "One-half normal charge for Lyle gun, 2½ ounces black powder" in nonferrous metal screw top container, 25 paper wads, 1 ram rod, 1 wire brush, 1 can light petrolatum, 12 wiping patches, 1 tapered wooden plug for muzzle of gun when not in use, and 1 set of instructions furnished by the manufacturer of the gun, all in a suitable box or chest with the gun. (R. S. 4405, 4426, 4488, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 404, 481, 1333, 50 U. S. C. 1275)

PART 60—BOATS, RAFTS, BULKHEADS, AND LIFESAVING APPLIANCES (COASTWISE)

1. Section 60.53 is amended to read as follows:

§ 60.53 *Line-throwing appliances—*

(a) *Requirements.* All coastwise steam vessels of 500 gross tons and over and all seagoing motor-propelled vessels of 500 gross tons and over shall be equipped with an approved line-throwing appliance, and equipment auxiliary thereto, of the impulse-projected rocket type, the requirements for which are set forth in subpart 160.040 of Subchapter Q of this chapter. All coastwise steam vessels of 150 gross tons and over but less than 500 gross tons and all seagoing motor-propelled vessels of 300 gross tons and over but less than 500 gross tons shall be equipped with an approved line-throwing appliance, and equipment auxiliary thereto, of the shoulder gun type or the impulse-projected rocket type,

the requirements for which are set forth in subparts 160.031 and 160.040, respectively, of Subchapter Q of this chapter. Lyle gun type line-throwing appliances already in service on merchant vessels may be continued in use so long as in good and serviceable condition: *Provided*, That any replacements shall be made with a line-throwing appliance of the impulse-projected rocket type or shoulder gun type, as applicable.

(b) *Accessibility.* The line-throwing appliance and its equipment shall be kept always easily and immediately accessible and ready for use. No part of this equipment shall be used for any other purpose.

(c) *Drills.* The master of a vessel equipped with a line-throwing appliance shall drill his crew in its use and require it to be fired at least once in every 3 months. Each drill shall be recorded in the ship's log book. The service line shall not be used for drill purposes. The drills shall be conducted as follows:

(1) For impulse-projected rocket type, by actually firing the rocket with any ordinary line of proper length attached; or,

(2) For shoulder gun type, by actual firing using the regular cartridge and projectile with any ordinary line of proper length; or,

(3) For Lyle gun type on existing vessels, by actual firing, using one-half the usual charge of powder with regular service projectile and any ordinary line of proper length.

(d) *Service recommendations.* The following precautions and procedure are recommended for the use of line-throwing appliances and equipment:

(1) *Impulse-projected rocket type.* Follow the operating instructions and safety precautions furnished by the manufacturer.

(2) *Shoulder gun type.* Follow the operating instructions and safety precautions furnished by the manufacturer.

(3) *Lyle gun type on existing vessels.* (i) Service powder charge should be about 5 ounces of black powder, and the powder bags should be furnished to the vessel containing 2½ ounces of black powder and marked "one-half normal charge". Under extraordinary circumstances, 7½ ounces (three 2½-ounce bags) of black powder may be used.

(ii) In making the line fast to the shank, pass it through the eye and take three or more half-hitches around its own part, leaving a loop of about 10 or 12 inches and taking the hitches about 6 inches apart. This will allow the line to slip slightly through the eye of the shank before the hitches fetch up, thus easing the strain on the line at the loop during the initial acceleration.

(iii) A considerable bight led over the side is recommended wherever possible, as it will tend to lessen the jerk on the line at initial acceleration.

(iv) At least a fathom of the line from the shank should be thoroughly wet before using to prevent burning.

(v) The faking box or reel should always be faced in the direction of the line of fire and placed abreast of the gun and as close to ship's side as possible. It is not advisable to place the line too close to the muzzle of the gun, as the concus-

sion may lift several layers or coils from the top, causing a snarl which in turn may cause the line to part.

(vi) Care should be taken in placing the equipment to prevent fouling of the line in rigging, ridge ropes, etc., which have a tendency to rise or jump up when the gun is fired.

(vii) Having made the gun and equipment ready for use, the following procedure in firing is recommended: Select a place where the gun may recoil without striking anything, or where it may be securely lashed down. Note the position of the vessel to be relieved, and the direction and approximate force of the wind, and then place the gun in position, making allowance for the drift of the line. Place the line on the windward side of the gun and about 3 feet from it. Make the line fast in the eye of the shank and insert the powder charge, projectile, and primer. In loading, make sure that the projectile is seated against the wad.

(viii) After using, the line should be thoroughly dried before rewinding or faking. (R. S. 4405, 4426, 4488, 49 Stat. 1544, 54 Stat. 346; and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 404, 481, 1333, 50 U. S. C. 1275)

2. Section 60.54 is amended to read as follows:

§ 60.54 *Equipment for line-throwing appliances.* (See § 59.61 of this chapter, as amended, which is identical with this section.)

PART 61—FIRE APPARATUS; FIRE PREVENTION

Section 61.4 (a) (1) is amended to read as follows:

§ 61.4 *Steam and inert-gas fire-extinguishing systems—(a) General requirements.* (1) All mechanically propelled vessels carrying combustible cargo in the holds, tween decks, or other closed cargo compartments, except those engaged exclusively in the carriage of coal in bulk, shall be equipped with means for extinguishing fire in such compartments by the use of steam fire-extinguishing systems or by the use of any inert-gas fire-extinguishing system approved by the Commandant. However, in specific cases where by reason of the design, such compartments are normally accessible and considered to be part of the working or living quarters of the crew or passengers, a water sprinkling system may be required in lieu of either a steam or inert-gas fire-extinguishing system. (R. S. 4426, 4470, 4471, 49 Stat. 1544, 54 Stat. 346, 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 404, 463, 463a, 464, 1333, 50 U. S. C. 1275)

PART 62—SPECIAL OPERATING REQUIREMENTS

Part 62 is amended by adding a new § 62.15, reading as follows:

§ 62.15 *Posting placards containing instructions for use of breeches buoy.* A placard containing instructions for the use of breeches buoy gear, Form CG 811, shall be posted in the pilothouse, engine room, and in the seamen's, firemen's,

and stewards' departments of every passenger or cargo vessel required by law or regulation to carry a line-throwing appliance, as well as on every passenger vessel, cargo vessel, or manned barge, which is 150 gross tons and over, but not required to carry a line-throwing appliance. (R. S. 4405, 4426, 4488, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 404, 481, 1333, 50 U. S. C. 1275)

Subchapter H—Great Lakes: General Rules and Regulations

PART 77—FIRE APPARATUS; FIRE PREVENTION

Section 77.4 (a) (1) is amended to read as follows:

§ 77.4 *Steam and inert-gas fire-extinguishing systems.* (See § 61.4 of this chapter, as amended, which is identical with this section.)

Subchapter I—Bays, Sounds, and Lakes Other Than the Great Lakes: General Rules and Regulations

PART 95—FIRE APPARATUS; FIRE PREVENTION

Section 95.4 (a) (1) is amended to read as follows:

§ 95.4 *Steam and inert-gas fire-extinguishing systems.* (See § 61.4 of this chapter, as amended, which is identical with this section.)

Subchapter J—Rivers: General Rules and Regulations

PART 114—FIRE APPARATUS; FIRE PREVENTION

Section 114.6 (a) (1) is amended to read as follows:

§ 114.6 *Steam and inert-gas fire-extinguishing systems.* (See § 61.4 of this chapter, as amended, which is identical with this section.)

Subchapter N—Explosives or Other Dangerous Articles or Substances and Combustible Liquids on Board Vessels

PART 146—TRANSPORTATION OR STORAGE OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS

LIST OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES CONTAINING THE SHIPPING NAME OR DESCRIPTION OF ARTICLES SUBJECT TO THE REGULATIONS IN THIS SUBCHAPTER

1. Section 146.04-5 *List of explosives and other dangerous articles and combustible liquids* is amended by deleting the articles "Iron oxide. (See: 'Iron sponge')," "Iron sponge," and "Iron sponge, spent" from the list.

2. Section 146.04-5 is further amended by inserting the following articles after "Iron arsenate, solid. (See: 'Ferrous or ferric arsenate, solid')":

(In column one) Iron mass, spent. (In column two) Inf. S.
(In column one) Iron mass, wet. (In column two) Haz.
(In column one) Iron oxide, wet. (In column two) Haz.

(In column one) Iron sponge not properly oxidized. (In column two) Inf. S. (In column three) Yellow.

(In column one) Iron sponge, spent. (In column two) Inf. S.

(In column one) Iron sponge, wet. (In column two) Haz.

3. Section 146.04-5 is still further amended by inserting the following article after "Spent mixed acid":

(In column one) Spent oxide. (In column two) Inf. S.

(R. S. 4472, as amended, 54 Stat. 1023, 1028, sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 170, 463a, 50 U. S. C. 1275)

CARGO HANDLING AND STOWAGE DEVICES; UNITED STATES COAST GUARD CONTAINER SPECIFICATIONS

4. Section 146.09-6 is amended to read as follows:

§ 146.09-6 *Portable magazine chest.* (a) Portable magazine chests shall be constructed of metal and lined with wood, and not less than 6 nor more than 40 cubic feet capacity. The lining shall be so fitted and finished as to form a smooth surface within the interior of the chest. Fastenings shall be recessed below the surface to avoid projections within the interior. Construction shall be such as to separate all containers of explosives or pyrotechnics from contact with metal surfaces. The metal shall be $\frac{1}{8}$ inch thick and free from crimps, buckles, and rough edges. All metal surfaces shall be wire brushed and all oil, grease, rust, loose scale, and other extraneous matter, removed before application of any primer. All surfaces of the metal chest and fittings shall be given a heavy coat of quick drying red lead, zinc chromate, or other suitable primer before painting. The finish shall consist of two coats of paint. The interior shall be lined with wood sheathing of a minimum thickness of $\frac{3}{4}$ inch. Securing means shall be countersunk below the surface of the sheathing. Securing means for the cover and four (4) lashing rings shall be provided. The lashing rings shall be 3-inch I. D. x $\frac{3}{8}$ -inch wire permanently attached to the magazine chest. Two runners, not less than 2 inches high shall be permanently attached to the bottom of the chest.

(b) Portable magazine chests used for the stowage of pyrotechnic signals, rockets, and powder for line-throwing guns shall be marked, in letters at least 3 inches high, with the following legend: "Portable Magazine Chest," "Inflammable—Keep Lights and Fire Away."

(c) Portable magazine chests now in use on vessels may be continued in use while in serviceable condition. (R. S. 4472, as amended, 54 Stat. 1023, 1028, sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 170, 463a, 50 U. S. C. 1275)

DETAILED REGULATIONS GOVERNING INFLAMMABLE SOLIDS AND OXIDIZING MATERIALS

5. Section 146.22-100 is amended by adding requirements regarding "iron sponge not properly oxidized," "iron mass, spent," "iron sponge, spent," or "spent oxide" in columns 1 through 7 to follow after "Inflammable solids, N. O. S." as follows:

§ 146.22-100 Table E—Classification: Inflammable solids and oxidizing materials.

(In column 1) Iron sponge not properly oxidized.

(When properly prepared and shipped in metal containers it is not subject to these regulations.)

(In column 2) Iron sponge or iron mass that has not been properly oxidized during manufacture which is liable to spontaneous heating and ignition.

Stow separate from all combustible material, explosives, inflammable liquids (red label), or acids (white label).

(In column 3) Yellow.

(In column 4) Stowage:

"On deck in open."

"On deck under cover."

"Tween decks readily accessible."

Outside containers:

Hermetically sealed metal-lined wooden boxes. Airtight metal containers.

(In column 5) Not permitted.

(In column 6) Ferry stowage (AA).

Outside containers:

Hermetically sealed metal-lined wooden boxes. Airtight metal containers.

(In column 7) Ferry stowage (BB).

Outside containers:

Hermetically sealed metal-lined wooden boxes. Airtight metal containers.

(In column 8) Iron mass, spent; iron sponge, spent; or spent oxide.

(In column 2) Iron sponge or mass after saturation with sulfur, when used in gas purification, is liable to spontaneous heating and ignition if stowed in deep piles.

No marking required.

(In column 3) No label required.

(In column 4) after exposure to air for a period of not less than 10 days, it may be accepted for transportation in bulk in all steel barges having open holds.

(In columns 5, 6, and 7) Not permitted.

(R. S. 4472, as amended, 54 Stat. 1023, sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 170, 463a, 50 U. S. C. 1275)

6. Section 146.22-100 is amended by changing the gross weights of shipments for "Pyroxylin plastics, rods, rolls, sheets, or tubes" and "Film support (nitrocellulose base)" so that the requirements in columns 4, 5, 6 and 7 under "Outside containers" for "Fiber drums (ICC-21A) not over 200 lbs. gr. wt." and "For sheet pyroxylin only: Special fiberboard box (ICC-12B) telescope type, not over 90 lbs. gr. wt." are amended to read as follows:

(In columns 4, 5, 6 and 7) Fiber drums (ICC-21A) not over 220 lbs. gr. wt.

For sheet pyroxylin only: Special fiberboard tube, telescope type, not over 15 lbs. net wt.

(R. S. 4472, as amended, 54 Stat. 1023, 1028, sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 170, 463a, 50 U. S. C. 1275)

DETAILED REGULATIONS GOVERNING CORROSIVE LIQUIDS

7. Section 146.23-10 (b) is amended by adding a new subparagraph (6) reading as follows:

§ 146.23-10 Sulfuric acid in bulk.

(b)

(6) Special approval of the Commandant may be obtained where more than 30 pounds per square inch pressure is required to discharge the cargo: *Provided*, That the tank is designed and constructed for the appropriate pres-

sure and meets the requirements for Class II, arc-welded unfired pressure vessels (Subchapter F—Marine Engineering). (R. S. 4472, as amended, 54 Stat. 1023, 1028, sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 170, 463a, 50 U. S. C. 1275)

DETAILED REGULATIONS GOVERNING COMPRESSED GASES

8. Section 146.24-15 is amended by changing paragraphs (a) and (1) to read as follows:

§ 146.24-15 Liquid chlorine in bulk.
(a) Liquid chlorine may be transported in bulk on barges when loaded in Class I arc-welded steel tanks (pressure vessel type), which are independent of the structure of the vessel.

(1) (1) No other kind of cargo except liquid caustic soda shall be on board any barge at the same time that chlorine in either liquid or vapor form is present in a cargo tank.

(2) Chlorine tanks shall not be installed within liquid caustic soda tanks.

(3) Barges used for the transportation of chlorine and liquid caustic soda shall be of steel construction.

(R. S. 4472, as amended, 54 Stat. 1023, 1028, sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 170, 463a, 50 U. S. C. 1275)

DETAILED REGULATIONS GOVERNING HAZARDOUS ARTICLES

9. Section 146.27-100 Table K—Classification: *Hazardous articles* is amended by deleting all the requirements in columns 1 through 7 for "iron sponge (iron oxide)" and "iron sponge, spent."

10. Section 146.27-100 is amended by adding new requirements in columns 1 through 7 for "iron mass, wet; iron sponge, wet; and iron oxide, wet" which shall be inserted after "insulation tape (varnished cloth type)" reading as follows:

§ 146.27-100 Table K—Classification: Hazardous articles.

(In column 1) Iron mass, wet; Iron sponge, wet; Iron oxide, wet.

(Shall not be shipped in burlap bags or other containers which are susceptible to spontaneous heating when wet.)

(In column 2) Iron mass or sponge consisting of a mixture of wood shavings with a hydrated ferric oxide used to remove sulfur from coal gas. Iron oxide in the form of dense, dark red, powder or lumps used to remove sulfur from coal gas.

Stow separate from inflammable liquids (red label) or inflammable solids and oxidizing materials (yellow label).

(In column 3) No label required.

(In column 4) Stowage:

"On deck in open."

"On deck under cover."

"Tween decks readily accessible."

Outside containers:

Steel barrels or drums, not over 1760 lbs. gr. wt.

(In column 5) Not permitted.

(In column 6) Ferry stowage (AA).

Outside containers:

Steel barrels or drums, not over 1760 lbs. gr. wt.

(In column 7) Ferry stowage (BB).

Outside containers:

Steel barrels or drums, not over 1760 lbs. gr. wt.

(R. S. 4472, as amended, 54 Stat. 1023, 1028, sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 170, 463a, 50 U. S. C. 1275)

Subchapter Q—Specifications

PART 160—LIFESAVING EQUIPMENT

Part 160 is amended by adding the following new subparts:

SUBPART 160.010—BUOYANT APPARATUS FOR MERCHANT VESSELS

Sec.

160.010-1 Applicable specifications.

160.010-2 Types.

160.010-3 General requirements for buoyant apparatus.

160.010-4 Buoyant apparatus using balsa wood for buoyancy.

160.010-5 Buoyant apparatus using air compartments for buoyancy.

160.010-6 Capacity of buoyant apparatus.

160.010-7 Methods of sampling, inspections and tests.

160.010-8 Nameplate and marking.

160.010-9 Procedure for approval.

SUBPART 160.013—HATCHETS (LIFEBOAT AND LIFE RAFT) FOR MERCHANT VESSELS

160.013-1 Applicable specification and plan.

160.013-2 Type and size.

160.013-3 Materials, workmanship, and construction details.

160.013-4 Inspections and tests.

160.013-5 Marking.

160.013-6 Procedure for approval.

SUBPART 160.017—LADDERS, EMBARKATION-DEBARKATION (FLEXIBLE), FOR MERCHANT VESSELS

160.017-1 Applicable specifications and plans.

160.017-2 Type.

160.017-3 Materials.

160.017-4 Construction.

160.017-5 Performance and workmanship requirements.

160.017-6 Inspections and tests.

160.017-7 Marking.

160.017-8 Procedure for approval.

SUBPART 160.018—LIFE RAFTS FOR MERCHANT VESSELS

160.018-1 Applicable specifications.

160.018-2 Types.

160.018-3 Construction; general.

160.018-4 Construction; Type A; cockpit type.

160.018-5 Construction; Type B; Catamaran type.

160.018-6 Capacity.

160.018-7 Inspection and testing.

160.018-8 Marking.

160.018-9 Procedure for approval.

SUBPART 160.027—LIFE FLOATS FOR MERCHANT VESSELS

160.027-1 Applicable specifications and plans.

160.027-2 Type.

160.027-3 General requirements for life floats.

160.027-4 Balsa wood body life floats.

160.027-5 Air compartment type life floats.

160.027-6 Capacity of life floats.

160.027-7 Methods of sampling, inspection, and tests.

160.027-8 Nameplate and marking.

160.027-9 Procedure for approval.

SUBPART 160.031—LINE-THROWING APPLIANCE, SHOULDER GUN TYPE (AND EQUIPMENT), FOR MERCHANT VESSELS

160.031-1 Applicable specification.

160.031-2 Type and size.

160.031-3 Materials, construction, workmanship, and performance requirements.

160.031-4 Equipment for shoulder gun type line-throwing appliance.

Sec.

- 160.031-5 Inspections and tests.
160.031-6 Marking.
160.031-7 Procedure for approval.

SUBPART 160.038—MAGAZINE CHESTS, PORTABLE, FOR MERCHANT VESSELS

- 160.038-1 Applicable specifications.
160.038-2 Type.
160.038-3 Materials, workmanship, and construction.
160.038-4 Inspections and tests.
160.038-5 Marking.
160.038-6 Procedure for approval.

SUBPART 160.039—FLOATS, WOOD, FOR MERCHANT VESSELS

- 160.039-1 Applicable specification.
160.039-2 Types.
160.039-3 Materials.
160.039-4 Construction and workmanship.
160.039-5 Inspection.
160.039-6 Approval.

SUBPART 160.040—LINE-THROWING APPLIANCE, IMPULSE-PROJECTED ROCKET TYPE (AND EQUIPMENT), FOR MERCHANT VESSELS

- 160.040-1 Applicable specification.
160.040-2 Type and size.
160.040-3 Materials, construction, workmanship, and performance requirements.
160.040-4 Equipment for impulse-projected rocket type line-throwing appliance.
160.040-5 Inspections, sampling, and tests.
160.040-6 Marking and labeling.
160.040-7 Procedure for approval.

AUTHORITY: §§ 160.010-1 to 160.040-7 issued under R. S. 4405, 4417a, 4426, 4481, 4488, 4491, sec. 11, 35 Stat. 428, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 373, 391a, 396, 404, 474, 475, 481, 489, 1333, 50 U. S. C. 1275. Statutes applied are cited to text in parentheses.

SUBPART 160.010—BUOYANT APPARATUS FOR MERCHANT VESSELS

§ 160.010-1 *Applicable specifications.*

(a) The following specifications, of the issue in effect on the date buoyant apparatus is manufactured, form a part of this subpart:

(1) Coast Guard specification:

164.002—Balsa Wood.

(2) Navy Department specification:

39B5—Balsa (Ochroma).

(3) Federal specifications:

C-G-496—Glue; Resin Type (Liquid and Powder).

V-T-276—Thread, Cotton.

(b) Copies of the above specifications shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 160.010-2 *Types*—(a) *General.* Buoyant apparatus is defined as meaning flotation equipment (other than lifeboats, life buoys, life preservers, and buoyant cushions) designed to support a specified number of persons in the water, and of such construction that it retains its shape and properties and requires no adjustment or preparation for use. The types of buoyant apparatus generally in use are the box-float type and the peripheral-body type defined in paragraphs (b) and (c) of this section. Alternate arrangements which will meet the performance requirements of this specification will be given special consideration.

(b) *Box-float type.* Box-float type is defined as buoyant apparatus having a box-like shape and deriving its buoyancy from balsa wood or other solid buoyant material or metal air compartments inclosed in a wood frame and sheathing.

(c) *Peripheral-body type.* Peripheral-body type is defined as buoyant apparatus having a continuous body formed in the shape of either an ellipse or rectangle, and having a circular, elliptical, or rectangular body cross section, and deriving its buoyancy from balsa wood or other solid buoyant material or metal air compartments.

§ 160.010-3 *General requirements for buoyant apparatus.* (a) Construction, materials, and workmanship shall provide a buoyant apparatus capable of passing the tests for strength, watertight integrity, buoyancy, airtightness of air compartments, if any, and stability, as described in § 160.010-7.

(b) Materials not covered by this specification shall be of good quality and in all respects suitable for the purpose intended.

(c) Buoyant apparatus shall be effective and stable, floating either side up.

(d) Buoyant apparatus shall be of such size and strength that it can be handled without the use of mechanical appliances, and its weight shall not exceed 400 pounds.

(e) The air compartments or buoyant material shall be placed as near as possible to the sides of the apparatus, and buoyancy shall not be dependent upon inflation.

(f) It shall have a life line of $\frac{3}{8}$ -inch diameter manila or sisal securely attached around the outside festooned in bights not longer than three feet with a seine float in each bight. Pendants shall be fitted approximately 18 inches apart. Pendants shall be $\frac{1}{4}$ -inch diameter manila or sisal, and shall be not less than 12 feet in length and secured in the middle. Pendants shall be made up in hanks, and the hanks shall be secured by not more than two turns of light twine. Peripheral-body type apparatus not fitted on the inside with a flush net or platform shall also be provided with a life line and pendants on the inside.

(g) Buoyant apparatus weighing 75 pounds or more shall be provided with a fitting or other arrangement for the attachment of a painter of a size not less than 2 inches in circumference.

(h) All edges and exposed corners shall be well rounded.

(i) Buoyant apparatus shall be of first class workmanship throughout.

§ 160.010-4 *Buoyant apparatus using balsa wood for buoyancy.* (a) Balsa wood shall comply with Coast Guard Specification 164.002 for Density A wood ($8\frac{1}{2}$ to 12 pounds per cubic foot) or with Navy Department Specification 39B5.

(b) Glues used shall conform to the requirements of Federal Specification C-G-496, and the gluing methods employed, including spreading weight, clamping pressures, temperatures of glue and atmosphere where work is done, and curing time and temperature, shall be in accordance with the recommendations of the manufacturer of the glue.

(c) The balsa wood pieces composing each layer shall be as large as practicable in order to keep the number of pieces and the number of seams and butts to a minimum, but no layer shall be less than 2 inches in thickness. The pieces shall be so arranged in adjacent layers that butts and seams are staggered in order to give maximum rigidity to the whole and to minimize all channels through which water might penetrate. The grain of the wood shall be so laid as to give minimum end grain on the outside surface of the finished body. The use of small pieces for filling purposes in the interior of the body is prohibited. The use of small pieces for fairing purposes on the exterior of the body will be permitted: *Provided*, That the grain complies with the above requirement and that the pieces are thoroughly glued in place. All butted ends shall be square and smooth. All sides shall be smooth and straight. All butts and seams shall be tightly fitted. The use of wood dowels or skewers $\frac{1}{4}$ inch in diameter and of a length as required to prevent slippage of balsa wood in adjacent layers when gluing will be permitted.

(d) Not less than 24 hours of the glue curing time shall elapse before shaping the balsa wood body. The rough body shall then be shaped down to its approximate final form. It shall be as smooth as practicable. If any gaps are found to exist in butts or seams, they shall be filled with balsa wood shims glued in.

(e) The balsa wood buoyant body, if to be used in a box-float type buoyant apparatus, shall be given a copious coating with a material found acceptable for this purpose. The body shall then be placed in the wood frame and solid wood sheathing shall be fitted to the frame and body so as to prevent movement of the body within the frame. The frame and sheathing shall be Sitka spruce, Northern pine, or equivalent. The frame and sheathing shall be smooth, and shall present no cutting edges, points, or splinters, and shall be finished with two coats of water-resisting spar varnish or protective paint. No plywood shall be used for the frame or sheathing.

NOTE: "Hydrotuf" furnished by Atlantic-Pacific Mfg. Corp., 124 Atlantic Ave., Brooklyn, N. Y.; "Synthetic Plasoform" furnished by Revertex Corp., of America, 3708 Northern Blvd., Long Island City, N. Y.; and "Balsa Wood Coating" furnished by Akron Paint and Varnish Co., Akron, Ohio; are coating materials which have been found acceptable. Other materials will be considered upon request.

(f) The balsa wood buoyant body, if to be used in a peripheral-body type buoyant apparatus, shall be covered with canvas of a strength and weight not less than No. 10. The canvas cover shall be set in and covered with a coating material found acceptable for this purpose. If the canvas cover is spirally wrapped on the body, each wrap shall overlap the preceding wrap by approximately half the width of the wrap. If stitching is required in making or applying the cover, it shall be a machine stitch not less than 5 stitches to the inch, or an overhand stitch with double threads, waxed, not less than 2 stitches to the inch. Thread shall have a strength not

less than No. 10/6 cotton thread complying with the requirements of Federal Specification V-T-276 for Type III-B (18 pounds). After drying, the body shall be given not less than one coat of protective paint.

(g) The intent of paragraphs (a) through (f) of this section is to produce a compact buoyant body without channels or openings through which water may penetrate the interior, and that shall not only be waterproof at its exterior surface without the aid of further covering but that each piece of which it is constructed shall be a unit which will localize within itself any absorption due to exterior damage. Every effort shall be directed to this result during construction.

§ 160.010-5 Buoyant apparatus using air compartments for buoyancy. (a) Air compartments shall be constructed of corrosion-resistant materials of sufficient thickness and strength so that the watertight integrity of the compartments will not be destroyed in the drop test for strength described in § 160.010-7 (e).

(b) All joints of air compartments shall be securely hook-jointed and soldered, riveted, or properly and securely welded by certified welders using approved electrodes or welding rods.

(c) Air compartments shall be not more than 3 feet in length and in no case shall there be fewer than 6 air compartments for buoyant apparatus of 25-person or more capacity, or fewer than 4 air compartments for buoyant apparatus of less than 25-person capacity. Each air compartment shall be fitted with a standard 1/4-inch pipe size test nipple and fitted with a hexagonal cap, both of corrosion-resistant materials, and be so located as to be readily accessible for testing purposes.

(d) Air compartments, if to be used in a box-float type buoyant apparatus, shall not be placed in contact with other metal work. The frame and sheathing holding the air compartments shall meet the requirements of § 160.010-4 (e).

§ 160.010-6 Capacity of buoyant apparatus—(a) General. The number of persons for which a buoyant apparatus is approved shall be the lowest number ascertained by the following methods:

(1) Final buoyancy of the apparatus after the watertight integrity test as described by § 160.010-7 (g) and (h), divided by 32. The above divisor shall be suitably increased where the apparatus is designed so that persons supported are only partially immersed or where facilities are provided for climbing on top of the apparatus.

(2) Number of feet in the outside perimeter of the apparatus. The inside edge of peripheral-body type apparatus (donut and similar shapes) shall not be considered in determining the capacity.

§ 160.010-7 Methods of sampling, inspections and tests—(a) General. The marine inspector shall be admitted to the place of manufacture and will familiarize himself with the various operations involved in the construction process and, from observation during manufacture, satisfy himself that buoyant apparatus

are made in general accordance with this subpart and of materials and parts conforming strictly with the plans and specifications submitted by the manufacturer and approved by the Commandant. The manufacturer shall provide a suitable place and the necessary apparatus for the use of the inspector in conducting such production check tests as are done at the place of manufacture. Specimens or samplings of materials entering into construction may be taken at random, either in the raw material state or during manufacture, by the inspector, and tests made for compliance with the applicable requirements.

(b) **Factory inspections of production lots.** Buoyant apparatus shall receive 100 percent surface inspection by the inspector before covering or before inserting the air compartments or buoyant material in the frame and sheathing, as the case may be, to determine compliance with the requirements of this subpart and conformance with the plans and specifications submitted by the manufacturer and approved by the Commandant. All air compartments shall be tested in accordance with paragraph (f) of this section. The inspector shall witness the entire construction of at least two buoyant apparatus from each lot produced.

(c) **Sampling of production lots.** A production lot shall consist of not more than 50 buoyant apparatus of the same design and capacity manufactured by one factory. For lots of at least 30 but not more than 50 buoyant apparatus, the sample shall consist of at least 2 representative complete specimen buoyant apparatus selected at random from the lot by the inspector. For lots of less than 30 buoyant apparatus, the sample shall consist of at least 1 representative complete specimen buoyant apparatus selected at random by the inspector.

(d) **Testing of sample buoyant apparatus from production lots.** Each sample buoyant apparatus selected for test from a production lot shall be subjected to the tests described in paragraphs (e) to (h), inclusive, of this section. The stability test, paragraph (i) of this section, ordinarily is not performed on samples from production lots, but may be done whenever question as to stability arises.

(e) **Strength test.** Drop or launch the complete sample buoyant apparatus into still water from a height of 60 feet. Test all air compartments, if any, in accordance with paragraph (f) of this section. There shall be no damage affecting the serviceability of the apparatus for the purpose intended.

(f) **Test for airtight integrity of air compartments.** Subject each air compartment to an air pressure of approximately one pound per square inch. Caps shall be removed from the test nipples of adjacent compartments, allowing them to vent to the atmosphere, during this test. There shall be no leakage or structural weakness evidenced.

(g) **Watertight integrity test.** Determine the initial buoyancy of the sample buoyant apparatus in accordance with paragraph (h) of this section. Submerge the buoyant apparatus for 24 hours at a depth of 10 feet or equivalent

water pressure. Determine the final buoyancy of the buoyant apparatus in accordance with paragraph (h) of this section. The final buoyancy shall be at least 32 pounds per person capacity of the buoyant apparatus, or 40 pounds per person capacity if the apparatus is designed so that persons supported are only partially immersed or if facilities are provided for climbing on top of the apparatus. The loss of buoyancy shall not exceed 5 percent of the initial buoyancy, except that the water absorption in the wood sheathing of the box-float type shall not be included in computing the 5 percent buoyancy loss.

(h) **Buoyancy test.** Load known weights on the sample buoyant apparatus until it is awash. The buoyancy shall be computed as equaling the downward gravitational force exerted by the weights loaded on the apparatus, whether the weights are submerged or not. A raised platform of known weight having two runners on edge spaced so as to bear on the apparatus may be used to support the weights out of water to avoid the necessity for making allowances for the displacement of submerged weights.

(i) **Stability test.** With the sample buoyant apparatus floating in water, a weight of 15 pounds of iron per foot of length shall be suspended in the water from the life lines along one edge. The same test shall be performed per foot of width. The minimum weight along any one edge shall be 60 pounds. The buoyant apparatus shall neither capsize nor become partially awash under either of these tests.

(j) **Lot acceptance or rejection.** The nameplates of buoyant apparatus accepted shall be marked with the inspector's initials, the date, and the letters, "U. S. C. G." Inability of a sample buoyant apparatus to pass the tests scheduled in paragraph (d) of this section shall be considered cause for rejection of the lot. A rejected lot may be reworked by the manufacturer to correct the kind of defect(s) found and be re-submitted for inspection and testing.

§ 160.010-8 Nameplate and marking. (a) A substantial corrosion-resistant nameplate shall be permanently attached to each buoyant apparatus on which is stamped the name of the manufacturer, symbol and/or serial number, approval number, dimensions, and number of persons capacity. Space shall be provided for the inspector's initials, the date, and the letters, "U. S. C. G."

§ 160.010-9 Procedure for approval. (a) Buoyant apparatus for use on merchant vessels are approved only by the Commandant, United States Coast Guard, Washington, D. C. Before any action is taken on any design of buoyant apparatus, detailed plans covering fully the arrangement and construction of the buoyant apparatus, material specifications, and description of construction methods shall be submitted to the Commandant through the Commander of the Coast Guard District in which the buoyant apparatus is built.

(b) If the drawings and specifications are satisfactory, the Commander of the Coast Guard District in which the buoy-

ant apparatus is to be built shall be notified in writing when fabrication is to commence. An inspector will be assigned to observe the construction in accordance with the plans and specifications, and upon completion will conduct the tests described by paragraphs (e) to (i), inclusive, of § 160.010-7.

(c) At the time that the tests are successfully completed, the manufacturer shall present to the inspector four copies of the plans and specifications, including any corrections, changes, or additions which may have been found necessary during construction or testing. If the manufacturer desires more than one set of approved plans, additional copies shall be submitted at that time.

(d) The marine inspector will file a report of the examinations and tests, together with the four copies of the corrected drawings and specifications, with the Commander of the Coast Guard District, who will transmit them to the Commandant to determine compliance with the requirements of this subpart and suitability of the buoyant apparatus for type or brand approval for use on merchant vessels.

SUBPART 160.013—HATCHETS (LIFEBOAT AND LIFE RAFT) FOR MERCHANT VESSELS

§ 160.013-1 *Applicable specification and plan*—(a) *Specification*. The following specification, of the issue in effect on the date hatchets are manufactured, forms a part of this subpart:

(1) Federal Specification GGG-H-131—Hatchets.

(b) *Plan*. The following plan, of the issue in effect on the date hatchets are manufactured, forms a part of this subpart:

(1) Dwg. No. 160.013-1 (b)—Hatchet (Lifeboat and Life Raft).

(c) *Copy on file*. A copy of the above specification shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 160.013-2 *Type and size*—(a) *Type*. Hatchets specified by this subpart shall be Type A hatchets (axe pattern or hunter's hatchet) as described in Federal Specification GGG-H-131, but other hatchets equal in strength and construction will be given special consideration.

(b) *Size*. Hatchets specified by this subpart shall be of one size, and the dimensions shall be approximately in conformance with Drawing No. 160.013-1 (b).

§ 160.013-3 *Materials, workmanship, and construction details*—(a) *General*. All materials, workmanship, and construction details shall be in substantial compliance with the provisions of Federal Specification GGG-H-131, except as provided for in this subpart.

(b) *Handle*. A ½-inch diameter hole shall be bored in the hatchet handle in the approximate location shown on Dwg. No. 160.013-1 (b), and the edges of the hole on both sides of the handle shall be rounded off to remove rough edges.

(c) *Lanyard*. Hatchets specified by this subpart shall be provided with a lanyard of ¼-inch diameter, 3-strand rope-laid line not less than 6 feet in length.

Lanyards shall be cotton, jute, or other suitable material. The lanyard shall be attached to the hatchet by threading one end through the hole in the hatchet handle and securing the rope end by splicing or by a bowline or other suitable knot.

(d) *Sheath*. No sheaths are to be provided for hatchets specified by this subpart.

§ 160.013-4 *Inspections and tests*—

(a) *General*. Hatchets specified by this subpart are not inspected at regularly scheduled factory inspections; however, the Commander of the Coast Guard District in which hatchets are manufactured may detail an inspector at any time to visit places where hatchets are manufactured to check materials and construction methods and to conduct such tests and examinations as may be required to satisfy himself that hatchets are being manufactured in compliance with the requirements of this specification and are suitable for the intended purpose. The manufacturer shall admit the inspector to his plant and shall provide a suitable place and the necessary apparatus for the use of the inspector in conducting tests at the place of manufacture.

§ 160.013-5 *Marking*—(a) *General*. Hatchets specified by this subpart shall be stamped or otherwise permanently marked in a legible manner on the side of the head with the manufacturer's name or with a trade mark of such known character that the source of manufacture may be readily determined, and with the manufacturer's type or size designation.

§ 160.013-6 *Procedure for approval*—(a) *General*. Hatchets are approved only by the Commandant, United States Coast Guard, Washington 25, D. C. Correspondence relating to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Pre-approval sample and plans*. Manufacturers who desire to manufacture approved hatchets shall submit to the Commander of the Coast Guard District in which the factory is located one sample hatchet, together with four copies of fully-dimensioned descriptive drawings showing all materials, finishes, etc., for the hatchet. The Commander of the Coast Guard District will forward the sample hatchet and the drawings to the Commandant to determine compliance with this subpart and suitability of the hatchet for type or brand approval for use in lifeboats and life rafts on merchant vessels.

SUBPART 160.017—LADDERS, EMBARKATION-DEBARKATION (FLEXIBLE), FOR MERCHANT VESSELS

§ 160.017-1 *Applicable specifications and plans*—(a) *Specifications*. The following specifications of the issue in effect on the date embarkation-debarkation ladders are manufactured, form a part of this subpart:

(1) Federal specifications:

QQ-A-327—Aluminum Alloy (Al-61), (Aluminum - Magnesium - Silicon); Plates, Sheets, and strips.

RR-C-271—Chain and attachments; Standard, Miscellaneous.
RR-R-571—Rope; Wire.
TT-W-573—Wood Preservative; Wolman-Salts (Tanalith).

(b) *Plan*. The following plan, of the issue in effect on the date embarkation-debarkation ladders are manufactured, forms a part of this subpart:

(1) Drawing No. 160.017-4 (a)—Flexible Embarkation-Debarkation Ladder.

(c) *Copies on file*. Copies of the above specifications and reference plan shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 160.017-2 *Type*—(a) Ladders specified by this subpart shall be of one type with either flexible steel chains or flexible wire ropes for suspension members, with steps of double wooden rungs, and either steel, wooden, or aluminum spacer ears. Alternate arrangements will be given special consideration.

§ 160.017-3 *Materials*—(a) *Suspension members*—(1) *Flexible steel chain*. If chains are used, they shall be single loop, weldless, lock-link pattern chains, in accordance with the requirements of Federal Specification RR-C-271, Type B, Class I. The nominal diameter of the chain wire shall be not less than 0.192 inch, and the chain shall have a breaking strength of not less than 2,940 pounds. The chain shall be free from all protruding wire ends.

(2) *Flexible wire rope*. If wire rope is used, it shall be 6 x 12 fiber core, galvanized plow steel, or equal, in accordance with Federal Specification RR-R-571 for Type IX. The wire rope shall have a nominal diameter of ½ inch and a minimum breaking strength of 3,980 pounds.

(b) *Ears*. (1) Steel ears shall be made from sheet steel not lighter than No. 14 U. S. Standard Gage (0.0747 inch nominal thickness).

(2) Wooden ears shall be made from suitable hardwood, such as hickory, ash, oak, maple, or beech. The wood shall be dried to approximately 12 percent moisture content based on oven dry weight, and shall be straight grained and free from knots, checks, honeycomb, warp or other detrimental defects.

(3) Aluminum ears shall be made from aluminum alloy sheet in accordance with Federal Specification QQ-A-327, and the finished ears shall meet the requirements for Condition T. The aluminum alloy sheet shall be not lighter than No. 12 Brown and Sharpe Gage (0.0808 inch nominal thickness).

(c) *Rungs*. Rungs shall be made from the same material as specified in paragraph (b) (2) of this section for wooden ears.

(d) *Lashing rings*. Lashing rings shall be ¾-inch by 3-inch galvanized steel conforming to the requirements for Type H attachments of Federal Specification RR-C-271.

(e) *Clips*. Clips for ladders with steel and wooden ears shall be made of sheet steel not lighter than No. 14 U. S. Standard Gage (0.0747 inch nominal thickness). Clips for ladders with aluminum ears shall be made of the same material as the ears.

§ 160.017-4 Construction—(a) General. Flexible embarkation-debarkation ladders shall be of the type illustrated by Drawing No. 160.017-4 (a), consisting of two top lashing rings, two bottom lashing rings, two suspension members (chains or wire ropes), double wooden rung steps and attachments, and suitably shaped ears. Each suspension member shall be continuous from its attachment to the top lashing ring to its attachment to the bottom lashing ring. The distance between the top lashing rings and the first step and the distance between the last step and the bottom lashing rings, shall be approximately 24 inches. The spacing between the steps shall be uniform, and they shall be approximately 15¼ inches apart. When the ladder is suspended vertically, the two rungs of each step shall lie in the same horizontal plane, and steps shall be parallel to each other and perpendicular to the suspension members. Means shall be provided for a secure attachment between the suspension members and the step. Failure of any rung, step, or ear shall not change the alignment of the remaining steps. The ears shall be secured to the step to form a rigid unit so that under torque applied by the hands, the ears cannot be twisted from the step. Wood screws or screw attachments shall not be permitted. When the ladder is suspended vertically, a plane passed through the horizontal centerline of each step shall pass through the minor axis or the corresponding centerline of each ear. The clear passage width shall be not less than 17¼ inches and not more than 19 inches. Finished ladders shall be free from splinters, burrs, sharp corners, or projections which might be injurious to bare hands or feet.

(b) Ears. The ears shall be uniform in size and constructed of one piece, and be either elliptical or rectangular in shape. Wooden ears shall be not less than 1¼ inches in thickness. Rectangular ears shall be approximately 10 inches in length and not less than 5 inches nor more than 6 inches in width, with the corners rounded to a 1 inch radius. Elliptical ears shall have a major diameter of approximately 10 inches and a minor diameter of not less than 5 inches nor more than 6 inches. All surfaces of wooden ears shall be worked down to a smooth finish and all edges shall be suitably rounded. Metal ears shall have one or more stamped or formed ribs and the edges of the ears shall be turned or rolled similarly to that indicated on Drawing No. 160.017-4 (a), with the flange thus formed not less than ¾ inch in width. Ears shall be attached to chain suspension members by use of bolts or rivets and a clip arrangement as indicated on Drawing No. 160.017-4 (a), or by other suitable means. Where wire rope is used for the suspension members, the strands shall be parted and the bolt or rivet inserted between the strands to provide a secure attachment to the ear.

(c) Rungs. Each step shall consist of two wooden rungs secured in such a manner that the rungs will not turn within the attachment or on the at-

tached suspension member. The two rungs of each step shall be spaced a uniform distance apart, not less than 1½ inches nor more than 2½ inches. The rungs shall be rectangular in shape approximately 1½ inches in width and not less than 1 inch in thickness. All the edges of each rung shall be slightly rounded or chamfered as shown on Drawing No. 160.017-4 (a). The attachment of the rung steps shall be by one of the following methods:

(1) By channel shaped clips approximately 1½ inches in depth by 1¼ inches flange width by not less than 4½ inches nor more than 5½ inches in length attached to the rung, ears, and suspension members by bolts or rivets. (See Drawing No. 160.017-4 (a)).

(2) By a section of the ears (steel or aluminum ears only) stamped out to form a suitable channel clip to hold the rungs and attached to the rungs with bolts or rivets. (See Drawing No. 160.017-4 (a)).

(d) Lashing rings. A lashing ring shall be attached to the top of each chain suspension member by a reverse lock-link shackle made from chain of a size and strength not less than the suspension member, which is locked by a button head rivet not less than ½ inch diameter, and with suitable countersunk clinch ring so formed that when the rivet is peened over, the rivet and clinch ring shall form a rounded surface. A lashing ring shall be attached to the bottom of each chain suspension member by a ¼ inch diameter screw pin anchor shackle with the screw pin securely peened over. A suitable thimble or wear plate shall be fitted between the shackles and the lashing rings. A lashing ring shall be attached to the top and bottom of each wire rope suspension member by a thimble splice with the splice closely wrapped with serving wire so as to securely wedge the thimble in place and leave no projecting ends of wire.

(e) Peening of rivets and bolts. All bolts and rivets used in the construction of ladders shall be rounded and the ends securely peened over.

(f) Finishes—(1) Steel parts. All steel parts shall be treated to resist corrosion by galvanizing applied by the hot dip process after the parts have been formed.

(2) Wooden parts. All wooden parts, after finishing and drilling of all necessary holes, etc., shall be given two coats of wood preservative conforming to the requirements of Federal Specification TT-W-573, Type B.

§ 160.017-5 Performance and workmanship requirements—(a) Strength (steps). When the double rung step with its attachments is subjected to the test described in § 160.017-6 (b), the step shall not fail nor shall there be any cracking, any permanent set, or any other sign of weakness in the step or its attachments.

(b) Strength (ladder). When the assembled ladder is subjected to the tests described in § 160.017-6 (c), there shall be no flaking or peeling of the finish on the component parts, the flexibility of the suspension members shall not be im-

paired, nor shall there be any other sign of weakness or injury to the ladder.

(c) Workmanship. Embarkation-debarkation ladders specified by this subpart shall be of first class workmanship throughout and shall be free from defects materially affecting their appearance or serviceability.

§ 160.017-6 Inspections and tests—

(a) General. A marine inspector shall examine all ladders at the place of manufacture for compliance with this specification. Samples of materials entering into the construction may be taken at random by the inspector and tests made for compliance with the applicable requirements. After satisfying himself that the ladders have been manufactured according to this specification and the manufacturer's drawings and specifications as approved by the Commandant, he shall select indiscriminately from each lot of 50 or less one ladder to be tested as specified in paragraphs (b) and (c) of this section. If the specimen ladder passes the tests, the lot shall be acceptable. If the specimen ladder fails any of the tests, the lot shall be rejected. Rejected lots may, when permitted by the inspector, be reworked by the manufacturer to correct the defect causing rejection and be re-submitted for official inspection. A copy of the inspector's report of the test including the lot number and serial numbers of ladders passed and rejected shall be forwarded to the Commandant.

(b) Test for strength (steps). The assembled ladder shall be supported in such a manner that the test load shall act on both the step and its attachments. A total static load of 700 pounds shall be applied separately to each of six steps for a duration of approximately one minute per step. The load shall be uniformly distributed over approximately 4 inches of contact surface at the center of the step. After completion of the test, the step and its attachments shall be inspected for compliance with the requirements of § 160.017-5 (a).

(c) Test for strength (ladder). The assembled, rolled up ladder, of the full length as supplied to the purchaser, with lashing rings secured, shall be dropped freely so that it will fetch up on the secured end. With the ladder suspended full length vertically, a total static load of 2,000 pounds shall be applied to the lower end of the ladder in such manner as to be distributed equally between the two suspension members. The ladder shall then be inspected for compliance with the requirements of § 160.017-5 (b).

§ 160.017-7 Marking. (a) Each ladder shall be branded or otherwise permanently and legibly marked on the rungs or ears, at intervals of not more than 5 feet, with the name of the manufacturer, the manufacturer's type or brand designation, the serial number of the ladder, the lot number, and the Coast Guard Approval number.

§ 160.017-8 Procedure for approval. (a) Embarkation-debarkation ladders for use on merchant vessels are approved only by the Commandant, United States Coast Guard, Washington 25, D. C. Before any action is taken on any design

of embarkation-debarkation ladder, detailed plans covering fully the arrangement and construction of the ladder, material specifications, and a description of construction methods shall be submitted to the Commandant through the Commander of the Coast Guard District in which the ladder is built.

(b) If the drawings and specifications are found satisfactory, the Commander of the Coast Guard District in which the ladder is to be built shall be notified in writing when fabrication is to commence. An inspector will be assigned to observe the construction in accordance with the plans and specifications, and upon completion of a sample ladder at least 40 feet in length, he will conduct the tests described by § 160.017-6 (b) and (c).

(c) After the tests are successfully completed, the manufacturer shall present to the inspector four corrected copies of the plans and specifications, including any changes or additions which may have been found necessary during construction or testing. If the manufacturer desires more than one set of approved plans, additional copies shall be submitted at that time.

(d) The inspector will file a report of the examinations and tests, together with the four copies of the plans and specifications, with the Commander of the Coast Guard District, who will transmit them to the Commandant to determine compliance with the requirements of this subpart and suitability of the ladder for type or brand approval for use on merchant vessels.

SUBPART 160.018—LIFE RAFTS FOR MERCHANT VESSELS

§ 160.018-1 *Applicable specifications.* (a) There are no other specifications applicable to this subpart.

§ 160.018-2 *Types.* (a) Life rafts covered by this subpart shall be either of two types, Type A, cockpit type, or Type B, catamaran type as defined by paragraphs (b) and (c) of this section.

(b) Type A, cockpit type life rafts shall consist of side and end buoyancy chambers together with equipment and provision compartments, surrounding a watertight cockpit or well deck. Passengers are seated on the benches forming the top surfaces of the raft with their feet in the well deck space. Type A rafts are required in ocean and coastwise service and their use is optional for service on other waters.

(c) Type B, catamaran type life rafts shall consist of two longitudinal buoyancy chambers united by a suitable framework, the whole forming a flush deck raft with suitable hatches in the deck allowing entry into the provision and equipment compartments located between the buoyancy chambers. This type raft is for use in service other than ocean and coastwise.

§ 160.018-3 *Construction; general.* (a) The requirements of this subpart apply to all new construction. Life rafts approved and in use prior to these regulations may be continued in service if in satisfactory condition.

(b) The requirements of this subpart for type of construction, material, etc.,

shall be complied with unless other arrangements in matters of construction details, design, or strength, equivalent in safety and efficiency are approved by the Commandant.

(c) Life rafts may be either reversible or self-righting, but if a raft is reversible the equipment and provisions shall be accessible from either side. The stowage of equipment shall be such as to withstand any shock received in launching. Life rafts should be as light as possible without sacrifice in strength and of such design that they can be rowed. Provision shall be made so that the life raft can be boarded easily from the water by a swimmer. The strength of a life raft shall be sufficient to withstand satisfactorily the required strength tests as outlined in § 160.018-7. The buoyancy compartments should be placed as near as possible to the sides of the raft and the buoyancy shall not depend on air or gas chambers which require inflation, or on loose, granular or similar material. A minimum of 3 cubic feet of watertight air space or equivalent buoyancy shall be provided for each person to be carried.

(d) All ferrous metals shall be protected by hot dip galvanizing or by other acceptable means. All external parts shall be protected by two coats of a suitable marine paint. All seams and joints in plating, unless otherwise specified, shall be properly double riveted, or securely welded by certified welders using approved electrodes or welding rods. All edges and exposed corners should be well rounded and the outside of the raft shall be free from sharp protrusions. Surfaces shall be as smooth as possible and projecting bolt heads, lugs, etc., avoided.

§ 160.018-4 *Construction; Type A; cockpit type.* (a) Type A life raft shall be constructed in such manner as to keep the well deck as free as possible from water, and drainage shall be provided in the form of scuppers with suitable plugs on chains, in the cockpit corners. At least one square inch of scupper area shall be provided for each ten square feet of area inclosed within the bulwarks.

(b) Each life raft shall be fitted with bulwarks at least 4 inches high. The side bulwarks shall be spaced 8 feet no inches (8' 0") from outside to outside in order to facilitate launching from a standard life raft skid, or a suitable cradle may be used to adapt the raft to the standard life raft skid.

(c) All wood framing, wood decks, etc., where used, shall be secured with bolts and washers or other approved means.

(d) Side and end benches shall be at least 18 inches wide and thwarts, if fitted, shall be at least 7½ inches wide. All seats should be approximately 15 inches above the well deck for passenger comfort and so arranged as to prevent the collection of water. The edges of all seats shall be rounded to at least a ½-inch radius.

(e) Two grab rails or bars shall be fitted extending completely around the raft.

(f) Rowlocks and rowlock sockets for each deck shall be provided as follows: Two in each side bulwark and one in one of the end bulwarks.

(g) Lifting rings or shackles and attachments shall be provided as necessary. The strength of all lifting devices and attachments combined shall be sufficient to support four times the weight of the fully equipped raft.

(h) Stowage compartments shall be entered through the vertical side of the cockpit and each compartment shall be watertight with a closing device of sufficient size so that all items in the compartment may be easily reached. Metal used in the construction of buoyancy chambers or watertight equipment lockers shall be not less than 16 U. S. Standard gage. Such compartments shall be fitted with a ¼-inch standard pipe size testing nipple with hexagonal corrosion resistant cap so placed as to be accessible for testing purposes. Where air compartments of any description are used for buoyancy no one compartment shall be of greater capacity than 8 cubic feet, and a minimum of 10 compartments of approximately equal size shall be provided.

§ 160.018-5 *Construction; Type B; catamaran type.* (a) Type B life rafts shall be constructed with the longitudinal buoyancy chamber bound to the body of the raft by retaining bands and these retaining bands shall be made so that the buoyancy chambers may be detached for inspection, cleaning, and painting without disassembling the body of the raft. The buoyancy chamber on each side of the raft shall be divided into a minimum of 3 watertight compartments of approximately equal length. The longest length of any compartment shall be 3 feet. Each compartment shall be fitted with a ¼-inch pipe size testing nipple with hexagonal corrosion resistant cap so placed as to be accessible for testing purposes.

(b) Stowage compartments shall be entered from the top and bottom and each compartment shall be watertight with a closing device of suitable size so arranged that all items in the compartments may be easily reached. That portion of the raft deck over the stowage compartments may be hinged or sliding for access into the compartments.

(c) A ¾-inch manila life line shall be securely attached around the outside of the life raft, festooned in bights not longer than 3 feet with a seine float in each bight.

(d) Rowlocks and rowlock sockets for each deck shall be provided as follows: Two in each side bulwark and one in one of the end bulwarks.

(e) Lifting rings or shackles and attachments shall be provided as necessary. The strength of all lifting devices and attachments combined shall be sufficient to support four times the weight of the fully equipped raft.

§ 160.018-6 *Capacity.* (a) The number of persons for which a life raft may be rated is determined as noted in paragraphs (b), (c) or (d) of this section and the smallest number obtained is the number to be allowed.

(b) The number of persons to be permitted in a life raft shall not exceed the number obtained by dividing the deck area inclosed within the bulwarks, in

square feet, by four for Type A rafts, and by three for Type B rafts.

(c) The number of persons permitted in any life raft shall not exceed the number wearing life jackets that can be seated comfortably without interfering with the use of the oars. This number shall be determined by test as set forth in § 160.018-7 (f).

(d) The number of persons permitted in a Type A life raft shall not exceed the number for which seating space is provided as determined by superimposing figures with outline as shown in Figure 160.018-6 (d) made to scale, on a plan of the raft.

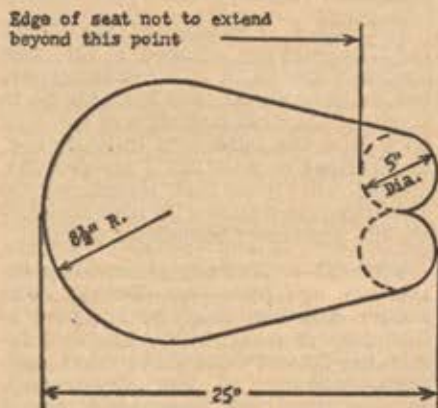


FIGURE 160.018-6 (d).

§ 160.018-7 *Inspection and testing*—(a) *Inspection*. Life rafts shall be inspected during the course of construction to determine that the arrangement and the materials entering into the construction are in accordance with the approved plans and the workmanship is of good quality. All watertight compartments in each raft built shall be tested for tightness with an air pressure of approximately one pound per square inch. The caps shall be removed from adjacent compartments while the test pressure is applied. There shall be no evidence of leakage or structural weakness.

(b) *Tests*. Before approval is granted to any design of life raft the tests outlined in the following paragraphs in this section must be completed satisfactorily in the presence of an inspector. For calculations and test purposes, the weight of one person is assumed to be 165 pounds.

(c) *Drop test*. One test raft shall be dropped from the required test height into the water in each of three positions successively; endwise, sidewise, and flat. The required test height is 45 feet for Type A life rafts, and 25 feet for Type B life rafts. For this test, all equipment including provisions shall be on board the raft in their proper position. No substitutes will be permitted for the equipment in this test. Damage as a result of this test shall not be sufficient to render the raft or the equipment unserviceable. The air pressure test for watertight compartments in those rafts subjected to the drop test should be performed at this time.

(d) *Freeboard test*. A test raft with all equipment aboard including provisions shall be loaded with a weight equivalent to the full complement for which approval is desired, in such man-

ner as to be at designed trim. The freeboard test shall be conducted after the drop test and if solid buoyancy is used in lieu of air tanks, the raft shall be allowed to remain 48 hours in this condition before measurements are taken. The platform of Type B rafts shall be at least 6 inches above the water in loaded condition and the well deck of Type A rafts shall be at least 2½ inches above the water in loaded condition.

(e) *Stability test*. Immediately after the freeboard test, with the raft in the same condition of loading, add a weight of 330 pounds (equivalent to the weight of two men) just inside the bulwark at one side to test for transverse stability. Move this additional weight to one end to test for longitudinal stability. No part of the well deck of a Type A raft or the platform of a Type B raft shall be submerged by this test.

(f) *Seating test*. Place in the life raft the number of persons, wearing life preservers, for which approval is desired and row a sufficient distance to demonstrate that the raft is not overcrowded. At this time, it should be determined if the maneuverability of the raft is satisfactory.

(g) *Production check tests*. After approval is granted to a life raft design, each raft built shall be checked by a marine inspector as noted in paragraph (a) of this section. One raft in each group of not more than 15 shall be selected at random by the inspector and shall be dropped into the water in one of the three standard positions from a height of not less than 45 feet for Type A or 25 feet for Type B. A different position shall be used for each successive raft tested so that out of each lot of 45 rafts constructed all three positions will have been used once.

§ 160.018-8 *Marking*. (a) Each life raft shall have permanently attached a substantial corrosion resistant nameplate, on which is stamped the name of the manufacturer, the approval number, the dimensions of the raft, the type of raft, the manufacturer's symbol and/or serial number, the number of persons for which the raft is approved, together with the inspector's initials, the date, and the letters "U. S. C. G."

§ 160.018-9 *Procedure for approval*. (a) Before action is taken on any design of life raft, detailed plans covering fully the arrangement and construction of the life raft, material specifications, stowage arrangement and seating arrangement shall be submitted to the Commandant through the Commander of the Coast Guard District in which the life raft is built.

(b) If the drawings required by paragraph (a) of this section are satisfactory, the Commander of the Coast Guard District in which the raft is to be built shall be notified in writing by the manufacturer when the fabrication is to begin. An inspector will be assigned to supervise the construction in accordance with the plans and upon completion, conduct the tests required by § 160.018-7.

(c) At the time the tests are successfully completed, the manufacturer shall present to the inspector 4 copies of the plans noted in paragraph (a) of this sec-

tion, including any correction, changes or additions which may have been found necessary since the original submittal. If the manufacturer desires more than one set of plans on which Coast Guard approval is indicated, additional copies should be supplied at that time. A copy of the approved plans and certificate of approval shall be kept on file by the manufacturer.

(d) The marine inspector will file a report of the examinations and tests, together with the four copies of the corrected plans and specifications, with the Commander of the Coast Guard District who will transmit them to the Commandant for action concerning approval for use on merchant vessels.

SUBPART 160.027—LIFE FLOATS FOR MERCHANT VESSELS

§ 160.027-1 *Applicable specifications and plans*—(a) *Specifications*. The following specifications of the issue in effect on the date life floats are manufactured, form a part of this subpart:

- (1) Coast Guard specification:
164.002—Balsa Wood.
- (2) Joint Army-Navy specification:
JAN-F-241—Floats, Life, Balsa Wood.
- (3) Navy Department specification:
39B5—Balsa (Ochroma).
- (4) Federal specification:
C-G-496—Glue; Resin-Type (Liquid and Powder).

(b) *Plans*. The following plans of the issue in effect on the date life floats are manufactured form a part of this subpart.

- (1) Coast Guard drawing:
160.027-4—Rectangular Balsa Wood Life Float, With Platform, Net, and Rigging.
- (2) Navy Department, Bureau of Ships, drawings:
88200-860050—Balsa Wood Life Float, Solid, Rectangular, Platform, Net, and Rigging (25-person capacity), Sheet 1.
88200-860051—Balsa Wood Life Float, Solid, Rectangular, Platform, Net, and Rigging (10-, 15-, 40-, and 60-person capacity), Sheet 2.

(c) *Copies on file*. Copies of the above specifications and reference plans shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 160.027-2 *Type*. (a) Life floats shall be of the peripheral buoyant body type with drop platform centrally located. Life floats which do not comply with all the construction provisions of this subpart, but which at least meet all the performance requirements, will be given special consideration.

§ 160.027-3 *General requirements for life floats*. (a) Life floats shall be properly constructed of suitable materials. They shall be reversible, i. e., effective and stable floating either side up. The cross section of the buoyant body may be circular, elliptical, or rectangular in shape, and if rectangular, the corners shall be rounded to a radius of at least 3 inches. The buoyancy of the life float may be derived from solid buoyant material or from air compartments. Buoy-

ancy shall not be dependent upon inflation.

(b) Construction, materials, and workmanship shall provide a life float, including body, platform, net, rigging, and straps, at least equivalent to the balsa wood life float specified by § 160.027-4; and all life floats shall be capable of passing the tests for strength, watertight integrity, buoyancy, airtightness of air compartments, if any, and stability, as described in § 160.027-7.

§ 160.027-4 *Balsa wood body life floats.* (a) Life floats having a balsa wood buoyant body shall be constructed as illustrated by Coast Guard Drawing 160.027-4; or, in cases where the dimensions of the body section are suitably increased to provide at least 40 pounds per person buoyancy, they may be constructed as illustrated by Navy Department, Bureau of Ships, Drawings S8200-860050 and S8200-860051 and in accordance with the provisions of Section E of Joint Army-Navy Specification JAN-F-241.

(b) Balsa wood shall comply with Coast Guard Specification 164.002 for Density A wood ($8\frac{1}{2}$ to 12 pounds per cubic foot) or with Navy Department Specification 39B5.

(c) Glues used shall conform to the requirements of Federal Specification C-G-496, and the gluing methods employed, including spreading weight, clamping pressures, temperatures of glue and atmosphere where work is done, and curing time and temperature, shall be in accordance with the recommendations of the manufacturer of the glue.

(d) The balsa wood pieces composing each layer shall be as large as practicable in order to keep the number of pieces and the number of seams and butts to a minimum, but no layer shall be less than 2 inches in thickness. The pieces shall be so arranged in adjacent layers that butts and seams are staggered in order to give maximum rigidity to the whole and to minimize all channels through which water might penetrate. The grain of the wood shall be so laid as to give minimum end grain on the outside surface of the finished body. The use of small pieces for filling purposes in the interior of the body is prohibited. The use of small pieces for fairing purposes on the exterior of the body will be permitted: *Provided*, That the grain complies with the above requirement and that the pieces are thoroughly glued in place. All butted ends shall be square and smooth. All sides shall be smooth and straight. All butts and seams shall be tightly fitted. The use of wood dowels or skewers $\frac{1}{4}$ -inch in diameter and of a length as required to prevent slippage of balsa wood in adjacent layers when gluing will be permitted.

(e) Not less than 24 hours of the glue curing time shall elapse before shaping the float body. The rough body shall then be shaped down to its approximate final form. It shall be as smooth as practicable. If any gaps are found to exist in butts or seams, they shall be filled with balsa wood shims glued in.

(f) The float body shall then be covered by a tightly wound strip of canvas

wrapped spirally around the body. Where splices are necessary, the overlap shall be at least three-quarters around the float body. The canvas shall be of a strength and weight not less than No. 10, about 8 inches in width, and each wrap shall overlap the previous wrap by about one-half the width of the strip. The canvas shall be set in and covered with a coating material found acceptable for this purpose. After drying, the float body shall then be given not less than one coat of protective paint.

NOTE: "Hydrotuf" furnished by Atlantic-Pacific Mfg. Corp., 124 Atlantic Ave., Brooklyn, N. Y.; "Synthetic Plasoleum" furnished by Revertex Corp. of America, 3708 Northern Blvd., Long Island City, N. Y.; and "Balsa Wood Coating" furnished by Akron Paint and Varnish Co., Akron, Ohio; are coating materials which have been found acceptable. Other materials will be considered on request.

(g) The intent of paragraphs (b) through (f) of this section, is to produce a compact structure without channels or openings through which water may penetrate the interior, and that it shall not only be waterproof at its exterior surface without the aid of further covering, but that each piece of which it is constructed shall be a unit which will localize within itself any absorption due to exterior damage. Every effort shall be directed to this result during construction.

(h) The platform, netting, rigging, and straps shall be in general accordance with Coast Guard Drawing 160.027-4, or with Bureau of Ships Drawings S8200-860050 and S8200-860051, as applicable. Care shall be taken that the platform and netting will readily pass through the life float when it is launched, regardless of which side of the life float strikes the water. All parts of the platform, including surfaces, edges, and rivets, shall be smooth and present no cutting edges, points, or splinters which may be dangerous to a barefoot person. The platform shall be finished with two coats of water-resisting spar varnish or protective paint. No plywood shall be used in the construction of any part of the platform. Suitable provision shall be made that the platform, under normal stowage conditions, will be retained in the center of the float and may readily be released from this position either on board ship or in the water.

(i) The life line around the float shall be festooned in bights not longer than 3 feet, with a seine float in each bight. Pendants shall be fitted approximately 18 inches apart. The straps holding the life line and pendants shall be 3-inch cotton webbing having a breaking strength of not less than 750 pounds for the 10- and 15-person sizes, and not less than 1,500 pounds for the 25-, 40-, and 60-person sizes.

§ 160.027-5 *Air compartment type life floats.* (a) Life floats having air compartments for buoyancy in the peripheral body shall have the shell of the body constructed of corrosion-resistant materials of sufficient thickness and strength so that the watertight integrity of the air compartments will not be

destroyed in the drop tests for strength described in § 160.027-7 (f).

(b) Metal joints forming air compartments shall be securely hook-jointed and soldered, riveted, or properly and securely welded by certified welders using approved electrodes or welding rods.

(c) Air compartments shall be not more than 3 feet in length and in no case shall there be fewer than 6 air compartments. Each air compartment shall be fitted with a standard one-quarter inch pipe size test nipple and fitted with a hexagonal cap, both of corrosion-resistant materials, and be so located as to be readily accessible for testing purposes.

§ 160.027-6 *Capacity of life floats.* (a) The capacity allowed a life float shall be either 10, 15, 25, 40, or 60 persons, but the capacity allowed shall not be in excess of the final buoyancy of the float body after the watertight integrity test, as described by § 160.027-7 (g) and (h), divided by 40, or that established by actual demonstration with persons wearing life preservers, whichever is least.

§ 160.027-7 *Methods of sampling, inspection, and tests—(a) General.* The marine inspector shall be admitted to the place of manufacture and will familiarize himself with the various operations involved in the construction process and, from observation during manufacture, satisfy himself that life floats are made in general accordance with this subpart and of materials and parts conforming strictly with the plans and specifications submitted by the manufacturer and approved by the Commandant. The manufacturer shall provide a suitable place and the necessary apparatus for the use of the inspector in conducting such production check tests as are done at the place of manufacture. Specimens or samplings of materials entering into construction may be taken at random, either in the raw material state or during manufacture, by the inspector, and tests made for compliance with the applicable requirements.

(b) *Factory inspections of production lots.* Life floats shall receive 100 percent surface inspection by the inspector before covering balsa wood body life floats or before painting air compartment type body life floats, as the case may be, to determine compliance with the requirements of this subpart and conformance with the plans and specifications submitted by the manufacturer and approved by the Commandant. All air compartments shall be tested in accordance with paragraph (f) of this section. The inspector shall witness the entire construction of at least two float bodies from each lot produced.

(c) *Sampling of production lots.* A production lot shall consist of not more than 300 life floats of the same design and capacity manufactured by one factory. For lots of at least 120 but not more than 300 life floats, the sample shall consist of 4 representative complete specimen life floats selected at random from the lot by the inspector. For lots of less than 120 life floats, the sample shall consist of at least one representative complete specimen life float from

each 30 life floats manufactured, selected at random by the inspector.

(d) *Testing of sample life floats from production lots.* Each sample life float selected for test from a production lot shall be subjected to the tests described in paragraphs (e) to (h), inclusive, of this section. The stability test, paragraph (i) of this section, ordinarily is not performed on samples from production lots, but may be done whenever question as to stability arises.

(e) *Strength test.* Drop or launch the complete sample life float into still water from a height of 60 feet twice, once flat and once endwise. Test all air compartments, if any, in accordance with paragraph (f) of this section. There shall be no damage to the body of the float, or other damage affecting the serviceability of the float for the purpose intended.

(f) *Test for airtight integrity of air compartments.* Subject each air compartment to an air pressure of approximately one pound per square inch. Caps shall be removed from the test nipples of adjacent compartments, allowing them to vent to the atmosphere, during this test. There shall be no leakage or structural weakness evidenced.

(g) *Watertight integrity test.* Determine the initial buoyancy of the sample float body only (platform, netting, and rigging removed) in accordance with paragraph (h) of this section. Submerge the float body for 24 hours at a depth of 10 feet or equivalent water pressure. Determine the final buoyancy of the float body in accordance with paragraph (h) of this section. The final buoyancy shall be at least 40 pounds per person capacity of the float, and the loss of buoyancy shall not exceed 5 percent of the initial buoyancy.

(h) *Buoyancy test.* Load known weights on the sample float body only (platform, netting, and rigging removed) until it is awash. The buoyancy shall be computed as equaling the downward gravitational force exerted by the weights loaded on the float, whether the weights are submerged or not. A raised platform of known weight having two runners on edge spaced so as to bear on the float body may be used to support the weights out of water to avoid the necessity for making allowances for the displacement of submerged weights. The life float body shall support at least 40 pounds per person capacity.

(i) *Stability test.* With the sample float body only (platform, netting, and rigging removed) floating in water, a weight of 15 pounds of iron per foot of length shall be suspended in the water from the life lines along the edge. The same test shall be performed per foot of width. The minimum weight along any one edge shall be 60 pounds. The life float body shall neither capsize nor become partially awash under either of these tests.

(j) *Lot acceptance or rejection.* The name plates of life floats accepted shall be marked with the inspector's initials, the date, and the letters, "U. S. C. G." Inability of a sample life float to pass the tests scheduled in paragraph (d) of this section shall be considered cause for rejection of the lot. A rejected lot may be re-worked by the manufacturer to cor-

rect the kind of defect(s) found and be re-submitted for inspection and testing.

§ 160.027-8 *Nameplate and marking.* (a) A substantial corrosion-resistant nameplate shall be permanently attached to each life float on which is stamped the name of the manufacturer, symbol and/or serial number, approval number, dimensions, number of persons capacity, and space shall be provided for the inspector's initials, the date, and the letters, "U. S. C. G."

§ 160.027-9 *Procedure for approval.* (a) Life floats for use on merchant vessels are approved only by the Commandant, United States Coast Guard, Washington, D. C. Before any action is taken on any design of life float, detailed plans covering fully the arrangement and construction of the life float, material specifications, and description of construction methods shall be submitted to the Commandant through the Commander of the Coast Guard District in which the life float is built.

(b) If the drawings and specifications are satisfactory, the Commander of the Coast Guard District in which the life float is to be built, shall be notified in writing when fabrication is to commence. An inspector will be assigned to observe the construction in accordance with the plans and specifications and upon completion will conduct the tests described by § 160.027-7 (e) to (i).

(c) At the time that the tests are successfully completed, the manufacturer shall present to the inspector four corrected copies of the plans and specifications, including any changes or additions which may have been found necessary during construction or testing. If the manufacturer desires more than one set of approved plans, additional copies shall be submitted at that time.

(d) The marine inspector will file a report of the examinations and tests, together with the four copies of the corrected drawings and specifications, with the Commander of the Coast Guard District who will transmit them to the Commandant to determine compliance with the requirements of this subpart and suitability of the life float for type or brand approval for use on merchant vessels.

SUBPART 160.031—LINE-THROWING APPLIANCE, SHOULDER GUN TYPE (AND EQUIPMENT), FOR MERCHANT VESSELS

§ 160.031-1 *Applicable specification.* (a) The following specification, of the issue in effect on the date shoulder gun type line-throwing appliances are manufactured, forms a part of this specification:

(1) Federal specification:

T-R-601-Rope; Manila.

(b) A copy of the above specification shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 160.031-2 *Type and size.* (a) The shoulder gun type line-throwing appliance shall be breech-loading for the cartridge and muzzle-loading for the projectile, of not more than 0.50 caliber, chambered for blank rifle cartridges,

smooth bored, and properly stocked, with shot line canister attached in a position below the barrel.

§ 160.031-3 *Materials, construction, workmanship, and performance requirements.* (a) All materials used in the construction of shoulder gun type line-throwing appliances and equipment shall be of good quality, suitable for the purpose intended, and shall conform to the requirements of this specification. The choice of materials shall be such that resistance to corrosion by salt water or spray, shock, temperature change, and wear will be obtained. The use of dissimilar metals in combination shall be avoided wherever possible, but when such contacts are necessary, provision shall be made to prevent such deleterious effects as galvanic corrosion, freezing or buckling of moving parts, and loosening or tightening of joints due to differences in coefficients of thermal expansion.

(b) The design and construction shall be proper and substantial for effective and safe operation aboard ship.

(c) The workmanship shall be first class and free from any imperfections of manufacture affecting appearance or serviceability of the gun.

(d) The gun, when loaded and fired in accordance with the manufacturer's instructions, shall be capable of propelling through relatively still air, the service projectile with service line attached, for a distance of not less than 250 feet, with deviation from the target not to exceed 15 feet either side.

§ 160.031-4 *Equipment for shoulder gun type line-throwing appliance.* (a) Ten (10) service projectiles, each machined from steel or bronze, weighing about 8 ounces, and having a shank of sufficient length to project slightly beyond the muzzle, with an eye at the upper end for securing the service line.

(b) Four (4) service lines, each 400 feet in length, about $\frac{3}{8}$ inch in circumference, of woven or laid up cotton or flax, very flexible, and having a breaking strength of not less than 250 pounds. Each line shall be one continuous length without splice, knot, or other weakening features and shall be made up or coiled in such way as to render it ready at all times for immediate use. The end of the line intended to be attached to the projectile shall have securely attached thereto a substantial tag bearing a permanent legend indicating its purpose, and the other end of the line shall be tagged in the same manner to prevent delay in securing proper and immediate action with the equipment. The line shall be coiled or reeled in such manner that when all the line leaves the canister it automatically becomes unattached and free from the canister and the gun. The line canister shall be secured by clamps or brackets below the barrel of the gun.

(c) One (1) auxiliary line consisting of at least 500 feet of 3-inch circumference manila complying with Federal Specification T-R-601.

(d) Twenty-five (25) cartridges of the caliber and loading specified in the instructions furnished by the manufacturer of the gun. The cartridges shall be blank with waterproof paper wad.

(e) One (1) cleaning rod with brush.
 (f) One (1) can of oil suitable for cleaning the gun and preserving the finish of the metal parts.

(g) Twelve (12) wiping patches of a size suitable for cleaning the bore.

(h) One (1) set of instructions including a list of the equipment furnished with the gun, the proper caliber and loading of the cartridges to be used in firing the gun, information as to the proper maintenance of the gun and equipment, and directions for loading and firing in service use shall be permanently engraved in plastic and mounted conspicuously in the case or box required by paragraph (i) of this section.

(i) A suitable case or box, properly compartmented for stowage of the appliance and auxiliary equipment, is required for stowage on merchant vessels. The auxiliary line need not be stowed in the case.

§ 160.031-5 Inspections and tests—

(a) *General.* Each gun and its equipment shall be examined for compliance with this specification and with the drawings and specifications submitted by the manufacturer and approved by the Commandant. Specimens or samplings of any materials of the gun or its equipment may be taken by the inspector and tests made for compliance with the applicable requirements. The marine inspector shall be admitted to the place of manufacture and will familiarize himself with the production facilities and manufacturing process. The manufacturer shall provide a suitable place and the necessary apparatus for the use of the marine inspector in conducting tests done at the place of manufacture. Tests at commercial or government laboratories, when applicable, shall be at the expense of the manufacturer.

(b) *Firing tests.* Each shoulder gun type line-throwing appliance manufactured under a type or brand approval shall be tested by the manufacturer before packing and shipping by proof firing a service projectile without line attached, using the type of cartridge required by the instructions furnished with the gun, into an earthen bank or other resisting medium from a reasonable distance. After this strength firing test, the gun shall be fired twice using just the blank cartridges supplied. This test shall demonstrate that the gun is still in operating condition after the strength test. Each such gun shall be capable of meeting the performance requirements set forth in § 160.031-3 (d), and unscheduled tests for performance will be made by the marine inspector at the discretion of the Commander of the Coast Guard District in which the factory is located. Guns exhibiting fracture or damage after the tests shall be rejected. A record of the serial numbers of all guns tested and the results of the tests shall be maintained by the manufacturer and furnished to the Commander of the district on request. A report of the serial numbers of the guns tested in the presence of the marine inspector and the results of the tests shall be made by the inspector to the Commander of the district, and a copy furnished to the manufacturer.

§ 160.031-6 *Marking—(a) Gun.* The gun shall be permanently and legibly marked on the barrel with the manufacturer's model or type designation of the gun, his serial number for the gun, the official Coast Guard approval number, and the name of the manufacturer. The gun stock shall have recessed in it a brass or other corrosion-resistant plate showing legible maintenance instructions for the care of the gun and its parts to prevent corrosion. After the proof test, the gun barrel shall be marked with the letters "P. T." and the name or mark of the company, or if the test was conducted in the presence of the marine inspector then it shall be marked with "P. T.", the inspector's initials, and the letters "U. S. C. G."

(b) *Projectile.* Projectiles shall be permanently and legibly marked with the name of the manufacturer.

(c) *Line and container.* The end of a service line intended to be attached to the projectile shall have securely attached thereto a substantial tag bearing a permanent legend indicating its purpose, and the other end of the line shall be tagged in the same manner to prevent delay in securing proper and immediate action with the equipment. The container of new service lines shall bear the name of the manufacturer, date of manufacture, and a statement to the effect that in all respects the line meets the requirements of this subpart for service lines. Line canisters and reels shall bear the name of the manufacturer.

§ 160.031-7 Procedure for approval—

(a) *General.* Shoulder gun type line-throwing appliances for merchant vessels are approved only by the Commandant, United States Coast Guard, Washington, D. C. Correspondence pertaining to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Manufacturer's plans and specifications.* In order to apply for approval of shoulder gun type line-throwing appliances, submit detailed plans and specifications, including a complete bill of materials, assembly drawing, and parts drawings descriptive of the arrangement and construction of the device, to the Commander of the Coast Guard District in which the factory is located. Each drawing shall have an identifying drawing number, date, and an identification of the device; and the general arrangement or assembly drawing shall include a list of all drawings applicable, together with drawing numbers and alteration numbers. The alterations shall be noted with the date of alteration or new drawing numbers and dates shall be assigned. The manufacturer will be advised whether or not the drawings and specifications appear satisfactory or what corrections are necessary, and then he may proceed with the construction of a pre-approval sample gun in accordance therewith. At the time of the tests of the pre-approval sample, the manufacturer shall furnish to the marine inspector four copies of all plans and specifications, corrected as may be required, for forwarding to the Commandant.

(c) *Pre-approval sample and tests.* A marine inspector will be detailed to the factory to observe the production facilities and manufacturing methods. The inspector will gage the bore of the gun and diameter of the projectiles. The pre-approval sample gun shall then be test fired in the presence of the inspector three rounds, at least one of which shall be with service line attached to the service projectile and shall meet the requirements of § 160.031-3 (d). After the strength firing tests, the gun shall be fired twice using just the blank cartridges supplied. This test shall demonstrate that the gun is still in operating condition after the strength tests. The marine inspector will file a report of the examinations and tests, together with the four corrected copies of the drawings and specifications, with the Commander of the Coast Guard District who will transmit them to the Commandant to determine compliance with the requirements of this subpart and suitability of the appliance and equipment for type or brand approval for use on merchant vessels.

SUBPART 160.038—MAGAZINE CHESTS, PORTABLE, FOR MERCHANT VESSELS

§ 160.038-1 Applicable specifications.

(a) There are no other specifications applicable to this subpart.

§ 160.038-2 *Type.* (a) Portable magazine chests shall be of a type suitable for stowage of pyrotechnic distress signals, rockets, or powder for line-throwing guns, and shall be of a size not less than 6 nor more than 40 cubic feet capacity. Alternate types of construction to that specified below will be given special consideration. (Sec. 2, 54 Stat. 1028, 46 U. S. C. 463a)

§ 160.038-3 *Materials, workmanship, and construction.* (a) Portable magazine chests shall be constructed of metal and lined with wood.

(b) The lining shall be so fitted and finished as to form a smooth surface within the interior of the chest. Fastenings shall be recessed below the surface to avoid projections within the interior. Construction shall be such as to separate all containers of explosives or pyrotechnics from contact with metal surfaces.

(c) The metal shall be $\frac{1}{4}$ inch thick and free from crimps, buckles, and rough edges. All metal surfaces shall be wire brushed and all oil, grease, rust, loose scale, and other extraneous matter, removed before application of any primer. All surfaces of the metal chest and fittings shall be given a heavy coat of quick drying red lead, zinc chromate, or other suitable primer before painting. The finish shall consist of two coats of paint. The interior shall be lined with wood sheathing of a minimum thickness of $\frac{3}{4}$ inch. Securing means shall be countersunk below the surface of the sheathing. Securing means for the cover and 4 lashing rings shall be provided. The lashing rings shall be 3" I. D. x $\frac{3}{8}$ " wire permanently attached to the magazine chest. Two runners, not less than 2 inches high shall be permanently attached to the bottom of the chest. (Sec. 2, 54 Stat. 1028, 46 U. S. C. 463a)

§ 160.038-4 *Inspections and tests.* (a) Portable magazine chests specified by this subpart are not ordinarily subject to regularly scheduled factory inspections.

§ 160.038-5 *Marking.* (a) Portable magazine chests used for the storage of pyrotechnic signals, rockets, and powder for line-throwing guns shall be marked, in letters at least 3 inches high, with the following legend: "Portable Magazine Chest," "Inflammable—Keep Lights and Fire Away."

§ 160.038-6 *Procedure for approval.* (a) Portable magazine chests are not subject to formal approval, but will be accepted by the inspector on the basis of this subpart at annual inspections and reinspections of vessels.

SUBPART 160.039—FLOATS, WOOD, FOR MERCHANT VESSELS

§ 160.039-1 *Applicable specification.* (a) The following specification, of the issue in effect on the date wood floats are manufactured, forms a part of this subpart:

(1) Coast Guard specification: 164.002—Balsa wood.

(b) A copy of the above specification shall be kept on file by the manufacturer.

§ 160.039-2 *Types.* (a) Wood floats specified by this subpart shall be of the following types:

Type A—Balsa wood floats.

Type B—Floats constructed of wood other than balsa wood.

§ 160.039-3 *Materials.*—(a) *Wood.* (1) Type A floats shall be made from balsa wood complying with the requirements of Coast Guard Specification 164.002 for either density A or B wood.

(2) Type B floats shall be made from wood having an average density of not more than 30 pounds per cubic foot, and it shall be good quality, straight-grained wood, free from checks or other imperfections that may reduce its strength or serviceability. Secure, tight knots less than 1½ inches in diameter will not be considered a defect, provided there is not more than one such knot in each lineal foot of the float, and the knots do not run across the wood.

(b) *Glue.* Glue, if used, shall be a waterproof resin type.

(c) *Dowels.* Dowel pins or skewers, if used, shall be dry, clear, straight-grained hardwood, ¾ inch in diameter, and of such length as to extend through the width of the float.

§ 160.039-4 *Construction and workmanship.*—(a) *General.* Wood floats shall be made rectangular in shape with the following dimensions: Type A (balsa wood floats) shall be not less than 3 feet in length by 11½ inches in width by 2 inches in thickness, and may be made in either one, two, or three pieces; Type B (floats constructed of wood other than balsa wood) shall be not less than 4 feet in length by 11½ inches in width by 1¾ inches in thickness, and may be made in either one or two pieces. If floats are constructed in more than one piece, the pieces shall be neatly fitted and securely pressure glued together, and the float reinforced with not less than four dowels

or skewers tightly driven through the entire width of the float. One dowel shall be located approximately 6 inches from each end of the float, with the other two properly spaced between. Each float shall be provided with two hand holes approximately 6 inches in length by 2 inches in width, one on each side, midway of the length. The outside edges of the hand holes shall be located at least 1 inch, but not more than 2 inches, from the edges of the float. All exposed edges and corners of the float shall be well rounded or beveled, and all surfaces shall be smooth and free from splinters or other projections. The finished float shall weigh not more than 20 pounds, and shall be in all respects a good and substantial float. (R. S. 4482, as amended, 46 U. S. C. 475)

(b) *Water-resistant finish for Type A floats.* All Type A (balsa wood) floats shall be given a copious coating of waterproof glue or other substance suitable for rendering balsa wood water resistant.

(c) *Finish for Type B floats.* All Type B (floats constructed of wood other than balsa wood) floats shall be given a copious coating of good quality wood preservative, and after drying, shall be given at least two coats of good quality paint or varnish.

(d) *Workmanship.* Wood floats shall be of first class workmanship throughout.

§ 160.039-5 *Inspection.*—(a) *General.* Wood floats covered by this specification are not subject to inspection at the place of manufacture, but are inspected during the annual or other inspection of the vessel upon which they are placed. When such floats are found to be in accordance with the requirements of this specification, the inspector shall plainly stamp them in waterproof ink with the words, "Passed", his initials, the port, and the date.

§ 160.039-6 *Approval.*—(a) *General.* Wood floats covered by this specification are not granted formal approval by the Commandant, but this specification should be adhered to by manufacturers in order to produce acceptable floats. Any correspondence pertaining to the subject matter of this specification should be addressed to the Commander of the Coast Guard District in which the factory is located.

SUBPART 160.040—LINE-THROWING APPLIANCE, IMPULSE-PROJECTED ROCKET TYPE (AND EQUIPMENT), FOR MERCHANT VESSELS

§ 160.040-1 *Applicable specification.* (a) The following specification of the issue in effect on the date impulse-projected rocket type line-throwing appliances are manufactured forms a part of this specification:

(1) Federal specification:

T-R-601—Rope; Manila.

(b) A copy of the above specification shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 160.040-2 *Type and size.* (a) Impulse-projected rocket type line-throw-

ing appliances specified by this subpart shall be of a type consisting essentially of a pistol, gun, or launcher, fitted with a flash plate, which can be hand-held and hand-directed, or suitably supported and hand-directed.

(b) Impulse-projected rocket type line-throwing appliances shall weigh (complete with one rocket, bridle, and leader) not to exceed 35 pounds and shall be of a size easily manageable by one man.

(c) Alternate arrangements which meet the performance requirements of this subpart will be given special consideration.

§ 160.040-3 *Materials, construction, workmanship, and performance requirements.*—(a) *Materials.* All materials used in the construction of impulse-projected rocket type line-throwing appliances and equipment shall be of good quality, suitable for the purpose intended, and shall conform to this subpart and to the specifications submitted by the manufacturer and approved by the Commandant. The choice of materials, when there is no specific requirement, shall be such that maximum safety to operating personnel will be maintained, and that resistance to corrosion by salt water or spray, shock, temperature change, and wear will be obtained. The use of dissimilar materials in combination shall be avoided wherever possible, but when such contacts are necessary, provision shall be made to prevent such deleterious effects as galvanic corrosion, freezing or buckling of moving parts, and loosening or tightening of joints due to differences in coefficients of thermal expansion.

(b) *Construction.* The design and construction shall be such as to obtain effective and safe operation aboard vessels at sea.

(c) *Workmanship.* Impulse-projected rocket type line-throwing appliances shall be of first class workmanship and shall be free from imperfections of manufacture affecting their appearance or that may affect their serviceability.

(d) *Performance.* When the rocket is fired from the appliance in accordance with the manufacturer's instructions, it shall be capable of passing the tests specified by § 160.040-5 (c).

§ 160.040-4 *Equipment for impulse-projected rocket type line-throwing appliance.* (a) Four (4) rocket projectiles, each complete with bridle and leader of fire-resistant materials. Two of the projectiles shall be of the buoyant type.

(b) Not less than 4 primer-ejector cartridges which fit the chamber of the pistol, gun, or launcher.

(c) Four (4) service lines, each ½-inch to ¾-inch diameter, with not less than 500 pounds breaking strength, and not less than 1,000 feet in one continuous length without splice, knot, or other retarding or weakening features. The line shall be either a 3-strand soft laid, good quality flax, or manila complying with Federal Specification T-R-601. The end of the line intended to be attached to the projectile shall have securely attached thereto a substantial tag bearing a permanent legend indicating its purpose, and the other end of the

line shall be tagged in the same manner to prevent delay in securing proper and immediate action with the equipment. Each line shall be coiled, faked, or reeled in its own faking box or reel in such manner that when all the line leaves the container it shall automatically become unattached and free from the container. The faking box or reel shall be of such size as to accommodate the size and type of line used. The complete faking box consists of three essential parts, i. e., box, frame with faking pins, and bottom board. The box has four sides and a top substantially joined together, and utilizes the frame with bottom board to form its bottom. The frame is made of battens, laid flat, and securely joined to form a hollow rectangle, the outside border of which is slightly larger than the box. The faking pins are permanently mounted vertically into the frame to form a row of pins paralleling each side of the frame. The bottom board is slightly smaller than the inside of the box and is perforated with holes to allow the faking pins to project through when the board is seated on the frame. The frame is held to the box by hasps or hooks. After the line has been faked, the faking box is prepared for use by inverting it and releasing the hasps holding the frame to the box. The frame is then carefully lifted to withdraw the faking pins while the bottom board is held down to keep the line in place. After removal of the bottom board, one end of the line is made fast to the projectile and the other end made fast to the ship. The reel type container shall consist of a reel upon which the line may be readily coiled and a canister or container into which the line may be placed which will afford a fair lead through which the line may pay out. The reel must be so designed as to permit easy withdrawal after the line has been coiled. Containers of new lines shall bear the name of the manufacturer, date of manufacture, and a statement to the effect that in all respects the line meets the requirements of this specification.

(d) One (1) auxiliary line consisting of not less than 1,500 feet continuous length of 3-inch nominal circumference manila complying with Federal Specification T-R-601.

(e) One (1) cleaning rod with wire brush of non-ferrous metal, prongs arranged in a spiral, of sufficient rigidity and size to clean the bore.

(f) One (1) can of oil suitable for cleaning and preserving the appliance.

(g) Twelve (12) flannel wiping patches of sufficient size to cover the brush and suitable for wiping the bore clean.

(h) One (1) set of instructions, including a list of the equipment furnished with the appliance, information as to the proper maintenance of the appliance and equipment, and directions for loading and firing the appliance in service use shall be permanently engraved in plastic and mounted conspicuously in the case or box required by paragraph (i) of this section.

(i) A suitable case or box, properly compartmented for stowage of the appliance and auxiliary equipment, is required

for stowage on merchant vessels. The service line and auxiliary line need not be stowed in the case.

§ 160.040-5 *Inspections, sampling, and tests*—(a) *General*. Each appliance and equipment shall be examined for compliance with this specification and with the drawings and specifications submitted by the manufacturer and approved by the Commandant. Specimens or samplings of any materials of the appliance or its equipment may be taken by the inspector and tests made for compliance with the applicable requirements. The marine inspector shall be admitted to the place of manufacture and will familiarize himself with the production facilities and manufacturing process. The manufacturer shall provide a suitable place and the necessary apparatus for the use of the inspector in conducting tests done at the place of manufacture. Tests at commercial or government laboratories, when applicable, shall be at the expense of the manufacturer.

(b) *Chamber, bore, projectiles*. The chamber and bore of the appliance and the diameter of the rocket projectiles furnished, shall be gaged to determine compliance with the applicable requirements of this subpart.

(c) *Firing tests*. Each appliance shall be tested in the presence of the marine inspector by firing three rounds. The marine inspector will select at random one appliance from each 50 of the same model manufactured, for distance and deviation test. For this appliance at least one of the three rounds fired shall be a service rocket projectile with service line attached. The line shall be carried, under conditions of reasonably still atmosphere, a minimum of 750 feet, with a maximum deviation from the target line of 50 feet on either side without breaking or fouling the line. The remaining test rounds for the 50 appliances may be dummy projectiles, of the same size and weight as the service rocket projectile, expelled by the regular primer-ejector cartridges into an earthen bank or other resisting medium from a reasonable distance. After the firing tests have been completed each appliance shall be fired twice, using the blank primer-ejector cartridges only, for the purpose of demonstrating that the appliance is still in operating condition. The entire assembly of the appliance shall be examined by the marine inspector, and any signs of fracture or damage shall be cause for rejection.

(d) *Inspector's acceptance of appliance and equipment and filing report*. When the marine inspector has satisfied himself that the appliance and equipment are of a type officially approved in the name of the manufacturer and meet the requirements set forth in this subpart and in the plans and specifications submitted by the manufacturer as approved by the Commandant, the barrel of the pistol shall be marked with the initials of the inspector followed by the letters "U. S. C. G." and the inspector shall file a report of the examinations and tests made and the results thereof with the Commander of the Coast Guard District wherein the tests were made, and the Commander of such district shall

furnish the manufacturer a copy of the report.

§ 160.040-6 *Marking and labeling*.

(a) The appliance shall be permanently and legibly marked by die-stamping or raised letters with the model designation of the appliance, the manufacturer's serial number for the appliance, the official Coast Guard approval number, and the name of the manufacturer. The rocket-projectiles shall be legibly marked with the name of the manufacturer, the model designation, the official Coast Guard approval number, and month and year manufactured. Primer-ejector cartridges shall be permanently and legibly marked with the name of the manufacturer, and the model designation, the official Coast Guard approval number, and the month and year manufactured.

(b) The containers of new service lines shall bear the name of the manufacturer, date of manufacture, and a statement to the effect that in all respects the line meets the requirements of this subpart for service lines. Line faking boxes and reels shall bear the name of the manufacturer.

§ 160.040-7 *Procedure for approval*—

(a) *General*. Impulse-projected rocket type line-throwing appliances for merchant vessels are approved only by the Commandant, United States Coast Guard, Washington, D. C. Correspondence pertaining to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Manufacturer's plans and specifications*. In order to apply for approval of impulse-projected rocket type line-throwing appliances, submit detailed plans and specifications, including a complete bill of materials, assembly drawing, and parts drawings descriptive of the arrangement and construction of the device, to the Commander of the Coast Guard District in which the factory is located. Each drawing shall have an identifying drawing number, date, and an identification of the device; and the general arrangement or assembly drawing shall include a list of all drawings applicable, together with drawing numbers and alteration numbers. The alterations shall be noted with the date of alteration, or new drawing numbers and dates shall be assigned. The manufacturer will be advised whether or not the drawings and specifications appear satisfactory or what corrections appear necessary, and then he may proceed with the construction of a pre-approval sample in accordance therewith. At the time of the tests of the pre-approval sample, the manufacturer shall furnish to the marine inspector four copies of all plans and specifications, corrected as may be required, for forwarding to the Commandant.

(c) *Pre-approval sample and tests*. A marine inspector will be detailed to the factory to observe the production facilities and manufacturing methods. The inspector will gage the bore of the appliance and the diameter of the projectiles. The pre-approval sample appliance shall then be test fired in the presence of the inspector in accordance with § 160.040-5 (c) three rounds with

service lines attached to the regular service rocket projectiles. The buoyant type projectiles shall be tested to determine that they will support their own weight in fresh water. The marine inspector will file a report of the examinations and tests, together with the four corrected copies of the drawings and specifications, with the Commander of the Coast Guard District who will transmit them to the Commandant to determine compliance with the requirements of this subpart and suitability of the appliance for type or brand approval for use on merchant vessels.

PART 161—ELECTRICAL EQUIPMENT

Subchapter Q is amended by adding a new Part 161 reading as follows:

SUBPART 161.001—LIGHTS (WATER): ELECTRIC, FLOATING, AUTOMATIC (WITH BRACKET FOR MOUNTING), FOR MERCHANT VESSELS

Sec.

- 161.001-1 Applicable specifications.
- 161.001-2 Type, grade, and size.
- 161.001-3 Materials and workmanship.
- 161.001-4 Construction and performance.
- 161.001-5 Inspection and methods of test.
- 161.001-6 Marking.
- 161.001-7 Procedure for approval.

SUBPART 161.006—SEARCHLIGHTS, MOTOR LIVERBOAT, FOR MERCHANT VESSELS

- 161.006-1 Applicable specifications and plans.
- 161.006-2 Type.
- 161.006-3 Materials and workmanship.
- 161.006-4 Requirements.
- 161.006-5 Sampling, inspections and tests.
- 161.006-6 Procedure for approval.

SUBPART 161.008—FLASHLIGHTS, ELECTRIC, HAND, FOR MERCHANT VESSELS

- 161.008-1 Applicable specifications.
- 161.008-2 Types and sizes.
- 161.008-3 Materials and workmanship.
- 161.008-4 General requirements.
- 161.008-5 Detail requirements.
- 161.008-6 Inspection and methods of test.
- 161.008-7 Marking.
- 161.008-8 Procedure for approval.

AUTHORITY: §§ 161.001-1 to 161.008-8 issued under R. S. 4405, 4417a, 4426, 4488, 4491, 49 Stat. 1544, 54 Stat. 346, and sec. 6 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 404, 481, 489, 1333, 50 U. S. C. 1275.

SUBPART 161.001—LIGHTS (WATER): ELECTRIC, FLOATING, AUTOMATIC (WITH BRACKET FOR MOUNTING), FOR MERCHANT VESSELS

§ 161.001-1 Applicable specifications.

(a) The following specifications, of the issue in effect on the date the electric water lights are manufactured, shall form a part of this specification:

(1) Federal specifications:

L-P-406—Plastics, Organic; General Specification (Test Methods).
VV-G-671—Grease; Lubricating, Graphite.

(2) Navy Department specifications:

33G7—Gaskets, Oil Resisting (Sheet, Strip, and Molded).
17P8 (INT)—Plastic Materials, Rigid Thermoplastic.
52P46—Paint, No. 17, Outside, Ocean-gray.

(3) Joint Army-Navy specifications:

JAN-B-18—Batteries, Dry.
JAN-P-79—Plastic Materials, Laminated Thermosetting; Rods and Tubes.

(4) Army-Navy Aeronautical specification and drawing:

Specification AN-P-47 Plugs; Dehydrator.
Drawing AN 4061-1 Plug; Engine Cylinder Dehydrator (18 MM Thd).

(5) United States Maritime Commission specification:

52MC-5—Paint; Gray, Low Visibility (Alkyd), Egg Shell.

(b) Copies of the above specifications shall be kept on file by the manufacturer, together with the approved plans and the certificate of approval.

§ 161.001-2 Type, grade, and size.

(a) Water lights, designated as light or lights, shall be of one type, grade, and size as described in this subpart.

§ 161.001-3 Materials and workmanship—(a) Materials. All materials used shall be of a first class quality suitable for the purpose intended, and shall conform to the requirements of this specification.

(1) All metal parts of the light, including bracket, shall be made from corrosion-resistant materials. When used in this specification, the terms corrosion-resistant material or corrosion-resistant metal shall mean material which, when subjected to the test described in § 161.001-5 (b) (10), shows no evidence of corrosion or corrosive action, such evidence to be in excess of six spots per square foot of area or any spot measuring larger than $\frac{1}{16}$ inch in any direction.

(2) All plastic materials shall be fully cured and essentially free from volatile plasticizers or fillers. Thermosetting plastics shall be used whenever practicable for parts under constant stress. Thermoplastic materials, whenever used, shall be of a formulation that has high resistance to cold flow, shrinkage, and warpage or discoloration due to heat and sunlight. The use of any plastic that has a burning rate of more than 1.5 inches per minute shall not be employed.

(3) All current-carrying parts shall comply with the requirements of § 161.001-4 (l), (k), (i), and (m).

(4) The choice of material used when none is specified or where a choice is permitted shall be such that maximum resistance to corrosion, shock, and temperature change will be insured. The use of dissimilar materials in combination shall, in general, be avoided, but when such contacts are necessary, means shall be taken to prevent such deleterious effects as galvanic corrosion, freezing or buckling of parts, and loosening or tightening of joints due to differences in coefficients of thermal expansion or shrinkage.

(b) Workmanship. Workmanship shall be first class in all respects. Lights shall be free from mechanical, electrical, or other imperfections or defects which materially affect appearances or which may affect serviceability.

(1) All electrical connections, except those intended to be removable, shall be mechanically secured and soldered and shall not depend upon solder alone for mechanical strength. Where electrical connections are in close proximity, each shall be electrically insulated.

§ 161.001-4 Construction and performance—(a) General. The light shall

be a self-contained unit suitable for use as a floating illuminated marker. It shall be capable of being stowed in an inverted position, in which position it shall be self extinguishing. When in water, it shall float in a vertically upright position and become illuminated automatically. When floating vertically in sea water (or other liquid of equal specific gravity) and tested in accordance with § 161.001-5 (b) (3), the center of the lamp (bulb) shall be not less than 6 inches above the surface of the liquid. In all points not specifically covered by this specification, the light shall be equal to the approved model.

(b) Construction. The light shall be new and shall consist essentially of a case, lens and bezel ring, gasket, switch, lamp assembly, dehydrator plug assembly, spare lamp, cell, pull ring, and necessary springs, wires, and mounting bracket. The light shall be watertight and vaporproof, and shall successfully comply with the requirements specified herein.

(c) Size. The light shall be cylindrical in shape with an inside diameter of approximately 3 inches, and the outside diameter shall be $3\frac{3}{8}$ ($\pm \frac{1}{32}$) inches. The light ready for operation, but without bracket, shall weigh not over 7 pounds.

(d) Case. The case shall be made of a thermosetting plastic or other corrosion-resistant material as specified in this subpart. The case shall be constructed to receive one standard Army type BA-23 cell as specified in paragraph (h) of this section, a switch, a dehydrator plug, and one spare lamp. The upper end shall have not less than six threads of sixteen threads per inch gage. The ledge at the open end shall have a radial surface at least $\frac{1}{8}$ inch wide to receive the gasket. The design shall be such that the only opening to the case is at the top end above the water line, and it shall permit the ready removal of the cell, dehydrator plug, switch, lamp assembly, and spare lamp. The case shall be provided with one ring of corrosion-resistant metal for lanyard attachment, approximately 1 inch in diameter, attached securely but not rigidly to the case by means of a band of metal similar to that of the ring, at a position of approximately 2 inches below the center of gravity of the light when the light is in its floating position. With the light supported at the bracket clip positions, the ring shall be capable of withstanding a pull of 120 pounds applied perpendicularly to the longitudinal axis of the light, without separating, destroying the watertightness of the light, or otherwise causing damage to the light.

(1) Case (plastic). If the case is of plastic, it shall consist of either a tube of heavy paper base or other filler impregnated and bonded with a phenolic or other suitable thermo-setting resin or binder, in accordance with Type LTS-E-4 of Joint Army-Navy Specification JAN-P-79, or shall be made of other plastic material subject to investigation and approval. In the event this latter material is offered, it will only be considered if it is equal or superior to the specified material in water absorption, impact strength, heat resistance, dimen-

sional stability, and other properties important to the serviceability of the light. The case shall be constructed as follows: (i) a molded one-piece tube closed at the bottom end and threaded at the open end for bezel ring attachment, or (ii) a rolled tube closed at the bottom end by means of a plug and threaded at the open end for bezel ring attachment; in the case of construction (ii) the bottom end shall be of the same material as the tube and shall be assembled in the tube by inside threading and cemented thereto with a water-proof, heat-resistant, proper synthetic resin adhesive. The inside of the case shall be coated with a suitable waterproof lacquer. The wall thickness of the case shall be not less than $\frac{3}{16}$ inch.

(2) *Case (corrosion-resistant metal).* If the case is of metal, it shall consist of a tube of corrosion-resistant material. The tube shall be seamless and conform to the outside dimensions in paragraph (c) of this section. The bottom shall be an integral part of, or welded to the tube. The wall thickness shall be not less than 0.025 inch.

(e) *Lens.* The lens shall be made of a clear, colorless, transparent toughened glass or plastic material. It shall be free from bubbles, striae, checks, scratches and other optical or mechanical defects. The lens shall be fastened to the light by means of a bezel ring (see paragraph (f) of this section). The lens thickness shall be sufficient to withstand the impact test described in § 161.001-5 (b) (2) and (6). The lens shall have a smooth outer surface; the inner or outer surface shall be of a design which will provide for a ratio of beam candlepower of the light on the horizon to mean spherical candlepower of the lamp (bulb) of not less than five. As a result of the accelerated weathering test specified in § 161.001-5 (b) (8), the lens shall not have crazed or appreciably discolored, and the ratio of beam candlepower of the light (at an angle of 90 degrees from the vertical axis of the light) to mean spherical candlepower of the lamp shall not be less than four. The test shall be conducted as specified in § 161.001-5 (b) (10).

(f) *Bezel ring.* The bezel ring shall be molded or fabricated from a high impact phenolic or other suitable thermosetting resin or corrosion-resistant metal with the same coefficient of thermal expansion as the case. The bezel ring shall be of such design as to be rigid, shall provide for a suitable gripping means, and shall not fail when the light is subjected to the tests specified in this subpart. The bezel ring shall be provided with not less than six threads of sixteen threads per inch gage and shall satisfactorily engage the threads of the case. The design of the bezel ring shall be such that it will hold the lens and the case tightly against the gasket. The threads shall be covered with a water-resistant lubricating graphite grease conforming to Grade B, or Grade AB of Federal Specifications VV-G-671. The bezel ring shall be tapered or designed in such a manner that, with the light stowed in its bracket (lens down), water will drain away from the bezel ring and the case juncture.

(g) *Gasket.* The lens and upper edge of the case shall bear against a gasket conforming to the requirements of Navy Department Specification 33G7 Gaskets, Oil-Resisting (Sheet, Strip, and Molded). The gasket shall be so designed that when cooperating with the lens and case, it will prevent water from entering the inside of the light. It shall be resilient, highly resistant to cold flow, and it shall not discolor or adversely affect the lens material.

(h) *Cell.* The light shall derive its source of electrical energy from one self-contained dry cell. The cell shall be in accordance with Army type BA 23 of Joint Army-Navy Specification JAN-B-18. The date of manufacture of the cell shall not be exceeded by more than five months when the light is shipped by the manufacturer.

(i) *Switch.* The switch shall be a glass enclosed mercury unit, satisfactorily making or breaking the electrical circuit when inverted within a temperature range of -30° F. to $+160^{\circ}$ F. The switch shall be suitably designed to prevent accidental lighting when the inverted light is jarred or shaken. A clip shall securely hold the switch and shall be so designed and the glass housing of the switch so protected that jarring of the light will not crack or destroy the switch. The construction of the switch shall be such that the glass housing is free from leaks, the electrodes are of platinum or cleaned and polished tungsten, and the mercury is triple distilled. After distillation the mercury shall not come in contact with the atmosphere. The switch shall be capable of 1,000 operations, opening and closing the electrical circuit. The resistance of the circuit including the switch, but less the lamp and cell, shall be not more than 0.05 ohm, both before and after 1,000 operations of the switch.

(j) *Dehydrator plug.* Each light shall contain, in the interior portion, a dehydrator plug conforming to the requirements of Army-Navy Aeronautical Specification AN-P-47 and Army-Navy Drawing No. 4061-1. The dehydrating agent shall be impregnated with a suitable indicator to provide for a visual approximation of the degrees of saturation of the dehydrating agent.

(k) *Lamp.* The lamp shall be new and of the miniature bayonet type rated at 1.3 volts and 0.6 ampere (Mazda Lamp No. 423). The center of the lamp filament shall be at the focal point of the lens. A spare lamp shall be carried in the interior portion of the light. The base of the lamp shall be nickel-plated brass, and the center contact shall be of pure tin.

(l) *Socket.* The socket shall be of corrosion-resistant metal, of durable construction and have suitable electrical clearances. Means shall be provided for minimizing the possibility of the lamp becoming loose due to vibration. The pressure exerted by the spring against the center contact of the lamp shall be not less than 50 nor more than 150 ounces. The lamp may be securely soldered to the socket and circuit wiring provided a convenient method of lamp, socket and wiring exists; when this method is used, the spare lamp shall be

attached to a spare replaceable portion of the wiring and enclosed in a moisture-proof and vapor-proof covering.

(m) *Reflector.* The reflector shall be made of a white thermosetting plastic.

(n) *Contacts and springs.* Points of electrical contact other than the switch and lamp shall be of nickel, cadmium, or tin-coated brass. They shall be of such construction and size as to eliminate undue potential drop in the circuit. Springs shall be made of spring grade phosphor bronze or beryllium copper.

(o) *Finish of light.* External parts other than the lens shall be properly cleaned and prepared, and coated with two coats of gray paint in accordance with Navy Department Specification 52P46 or United States Maritime Commission Specification 52MC-5 (for Type 2 paint). The finish shall be uniform and smooth, shall adhere firmly, and withstand reasonable impact without chipping or cracking.

(p) *Mounting bracket.* The mounting bracket shall consist essentially of two spring clips, or one spring clip and a supporting member of suitable design, mounted on a strip. The design of the bracket shall be such that, with the bracket mounted in its normal position on a vertical supporting surface, the inserted light shall separate from the bracket with a pull on the ring of the case of not less than 20 nor more than 40 pounds when such pull is applied horizontally and directly away from the vertical supporting surface. There shall be two spring clips, or one spring clip and a supporting member of suitable design, to hold the light and located near the bottom and top thereof, and two holes suitable for fastening to a flat surface with $\frac{1}{4}$ -inch bolts. The clips shall be made of either spring strip phosphor bronze or beryllium copper. Each clip shall be connected to the back strip by not less than four heavy silicon bronze or phosphor bronze rivets, or shall be securely welded to the strip. The strip shall be so designed that the light cannot slip out of its bracket due to gravity. No light shield shall be provided. All metal parts of the bracket shall be finished similarly to that of the case.

(q) *Ruggedness.* The light complete with cell shall be capable of withstanding the drop and ruggedness tests specified in § 161.001-5 (b) (2) and (6) without any damage or distortion which might impair its serviceability or watertightness.

(r) *Dimensional stability and vapor-proofness.* The light complete, with cell (or a dummy cell), shall be capable of undergoing the dimensional stability and vaporproof test of § 161.001-5 (b) (7) without any damage, shrinkage, or distortion which might impair its serviceability, watertightness, or vaporproofness. The light shall be considered vaporproof when examination of the interior reveals no moisture and if the dehydrator plug has not increased in weight more than 0.1 gram after the test covered by § 161.001-5 (b) (7).

(s) *Watertightness.* The light shall be watertight and shall show no leakage of water into its interior when tested in accordance with § 161.001-5 (b) (1) and (5).

(t) *Light output.* The illumination issuing from the light shall show all around the horizon and shall extend downward to a line making an angle of 120 degrees with the vertical axis of the light.

§ 161.001-5 *Inspection and methods of test*—(a) *Inspection.* The Coast Guard reserves the right to make any inspection it deems necessary to determine the conformance of the materials and equipment to this specification.

(1) The facilities, materials and labor for all tests shall be furnished by the manufacturer, when available, and at no cost to the Coast Guard.

(2) When testing facilities are not available at the point of inspection, samples shall be forwarded, prepaid by the manufacturer, to the Commandant, United States Coast Guard, Washington, D. C., for completion of tests.

(b) *Methods of test*—(1) *Fire hose test.* With dehydrator plug removed, the light shall be subjected to the spray of a 1½-inch fire hose operating under a pressure of approximately 100 pounds per square inch, and 10 feet from the light. The spray shall be directed at many sections of the light (particularly at the lens joint). The duration of the test shall be not less than 15 minutes. The lights prior to test shall be conditioned at a temperature of 90° F. to 100° F. and the temperature of the water shall be 60° F. (± 10° F.). After drying the outside portions, the light shall be disassembled and examined for leakage.

(2) *Drop test.* The light, complete with cell, shall be dropped twice from a height of 60 feet into sea water (or liquid of equal specific gravity). After each drop, the light shall be examined for leakage, cracks or breakage. Failure of lamp filament shall not constitute failure of the light.

(3) *Float test.* The light, complete with cell, shall be allowed to float for 12 hours in sea water (or liquid of equal specific gravity). At the beginning and end of this period the light center shall be not less than 6 inches above the surface of the water, and the light shall not have changed its waterline more than ¼ inch.

(4) *Material tests.* Plastic parts shall be tested in accordance with the applicable test methods described in Federal Specification L-P-406, *Plastics, Organic*; General Specifications (Test Methods).

(5) *Watertightness.* The light, complete with cell and with dehydrator plug removed, shall be submerged horizontally in salt water (3% aqueous solution of NaCl) at a head of one foot for a period of 24 hours. At the end of this period, the light shall be removed and the outside dried by wiping. The light shall then be disassembled and examined for conformance to the requirements of § 161.001-4 (s).

(6) *Ruggedness.* The light, complete with cell, shall be cooled to 0° F. It shall then be dropped twice from a height of 3 feet onto a rigidly mounted steel plate or concrete; the distance of 3 feet shall be measured from top of lens to impact surface. When dropped, the light shall strike on the top center of the lens.

The case shall be placed in its bracket, and the bracket mounted securely and positioned so the light is lying in a horizontal position. A steel ball 1¼ pounds in weight shall be allowed to fall three times through a distance of 48 inches; once onto the center portion of the case, once onto the bezel ring, and once onto a point approximately ½ inch from the end of the case. The case shall be examined for breakage, cracking, and denting in accordance with § 161.001-4 (q). Failure of lamp filament shall not constitute failure of the light.

(7) *Dimensional stability and vapor-proof test.* The dehydrator plug contained in the light, with its seal removed, shall be accurately weighed and placed in its position in the light and the light, complete with cell (or a dummy cell), quickly and immediately assembled and placed, lens down, in its bracket in a temperature-humidity chamber. The unit shall then be subjected to the nine-day continuous temperature-humidity cycle indicated in Table 161.001-5 (b) (7) without opening the light during the cycle. At the end of the test, the dehydrator plug shall be immediately removed and accurately reweighed. The increase in weight of the dehydrator plug shall conform to the requirements of § 161.001-4 (r). The test specified in subparagraph (5) of this paragraph shall then be repeated.

TABLE 161.001-5 (b) (7)

Time period, hours	Temperature degrees F. (± 2° F.)	Relative humidity percent
24	160	85-90
24	-40	95-100
24	160	0-5
24	160	85-90
24	-40	95-100
48	160	0-5
48	70	45-85

(8) *Accelerated weathering (plastic only).* The lens and reflector shall be exposed to 240 hours of accelerated weathering in accordance with Method No. 6021 of Federal Specification L-P-406.

(9) *Light output test.* This test shall be made at a temperature of 70° to 80° F., after the cell has reached equilibrium, and within 30 days from the time of sampling, using the cell and lamp supplied with the light. The lens used shall be tested before and after the accelerated weathering test of subparagraph (8) of this paragraph. The beam candlepower of the light shall be measured for conformance to the requirements of paragraph 161.001-4 (e).

(10) *Accelerated weathering (metallic parts).* Under ultraviolet light alternate three-minute cycles of: (a) 20 percent salt spray at 55° C., and (b) an air blast at 55° C. without interruption for a period of 200 continuous hours.

§ 161.001-6 *Marking*—(a) *Instructions and nameplate.* Each light shall be provided on the outside with a brass or plastic plate containing instructions for maintenance and care of the light. The instructions shall be clearly marked in a plain, easily readable, permanent man-

ner. The nameplate data shall contain the name of the manufacturer, the Coast Guard Approval Number, and the drawing number and alteration identification thereof of the light. In securing the instructions and/or nameplate to the case, the wall of the case shall not be penetrated. The instruction data shall be worded as follows:

IMPORTANT

1. Replace cell and dehydrator plug every 12 months.
2. When reassembling lens replace gasket and screw down tight.
3. Keep lens clean.
4. Lamp should light when in upright position.

§ 161.001-7 *Procedure for approval*—(a) *General.* Automatic floating electric water lights are approved only by the Commandant, United States Coast Guard, Washington 25, D. C. Correspondence relating to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Manufacturer's plans and specifications.* In order to obtain approval of automatic floating electric water lights, detailed plans and specifications, including a complete bill of material, assembly drawings, and parts drawings descriptive of the arrangement and construction of the device shall be submitted to the Commander of the Coast Guard District in which the factory is located. Each drawing shall have an identifying drawing number, date, and an identification of the device; and the general arrangement or assembly drawing shall include a list of all drawings applicable, together with drawing numbers and alteration numbers. The manufacturer will be advised whether or not the drawings and specifications appear satisfactory or what corrections appear necessary and then he may proceed with the construction of the pre-approval sample in accordance therewith.

(c) *Pre-approval sample.* The pre-approval sample, together with four copies of the plans and specifications, corrected as may be required, shall be forwarded to the Commandant via the Commander of the Coast Guard District in which the factory is located for inspection and tests. The cost of the tests are to be borne by the manufacturer.

SUBPART 161.006—SEARCHLIGHTS, MOTOR LIFEBOAT, FOR MERCHANT VESSELS

§ 161.006-1 *Applicable specifications.* (a) The following specifications, of the issue in effect on the date motor lifeboat searchlights are manufactured, form a part of this subpart:

- (1) Navy Department specifications:
- 42S5—Screws, machine, cap and set, and nuts.
- 43B11—Bolts, nuts, studs, and tap-rivets (and materials for same).

(2) Federal specification:

QQ-B-611—Brass, Commercial; bars, plates, rods, shapes, sheets, and strip.

(3) A. S. T. M. Standards:

B117-44T—Method of salt spray (fog), testing (tentative).

B141-45—Specification for electrodeposited coatings of nickel and chromium on copper, and copper-base alloys.

(4) Underwriters' Laboratories, Inc.: Standard for flexible cord and fixture wire, third edition, October, 1935.

(b) Copies of the above specifications shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 161.006-2 *Type*. (a) The motor lifeboat searchlight shall be of the incandescent type equipped with a lamp of approximately 90 watts of proper voltage for use with the electric power installation of the lifeboat, usually a 12-volt radio storage battery.

§ 161.006-3 *Materials and workmanship*—(a) *Materials*. The materials shall be of best quality and suitable in every respect for the purpose intended. All materials shall be corrosion resistant. The use of acid flux in making joints shall not be permitted.

(b) *Workmanship*. The workmanship shall be first class in every respect.

§ 161.006-4 *Requirements*—(a) *Corrosion-resisting materials*. Silver, corrosion-resisting steel, copper, brass, bronze and copper-nickel alloys are considered satisfactory corrosion-resistant materials within the intent of this subpart.

(b) *Searchlight parts*. The motor lifeboat searchlight shall, in general, consist of the following parts:

Yoke and pedestal.
Housing.
Front door.
Reflector.
Lamp socket.
Supply cable.

(c) *Weight and dimensions*. The height of the motor lifeboat searchlight shall not exceed 19 inches and the weight shall not exceed 16 pounds, unless otherwise approved.

(d) *Wiring*. The motor lifeboat searchlight shall be wired with a five-foot length of rubber-jacketed hard service flexible cord, Underwriters' Laboratories, Inc., Type S, or equivalent, of a size not less than No. 16 AWG. At the point where the cable enters the searchlight, a waterproof entrance bushing with packing gland and cord grip shall be provided.

(e) *Lamp and socket*. The motor lifeboat searchlight shall be provided with a lamp of not less than 80 watts nor more than 100 watts, and a suitable lamp socket. Means shall be provided for adjusting and securing the lamp socket at any position between the focal point and a point not less than ¼ inch away from the focal point in either direction in the axis of the beam.

(f) *Housing*. The housing shall be constructed of brass, Federal Specification QQ-B-611, Composition E, copper alloy, or other suitable corrosion-resistant material as approved, of a thickness not less than No. 20 AWG. The housing shall be capable of free movement of at least 60 degrees above and 20 degrees below the horizontal, and of a free movement of 360 degrees in a horizontal plane. It shall be possible to lock the barrel in any desired position, vertically or horizontally, without the use of tools. A sturdy metal hand grip shall be provided

at the back of the housing for housing-adjusting purposes.

(g) *Front door*. A front door shall be attached to the housing in such a manner that it can be readily opened or removed, without the use of tools, for the purpose of relamping. The door, when closed, shall be waterproof. Clear front door glass shall be used.

(h) *Reflector*. The reflector shall be paraboloidal. It shall be constructed of brass, Federal Specification QQ-B-611, Composition E, finished and with electroplated coatings of nickel and chromium in accordance with A. S. T. M. Specification B141-45, Type K. C., or as otherwise approved. The reflector shall furnish a minimum average illumination of 100 foot candles, when measured as specified in § 161.006-5 (b) (2).

(i) *Yoke and pedestal*. The yoke and pedestal shall be of rugged construction. The pedestal shall be suitable for bolting to a flat surface with not less than four ½-inch diameter bolts.

(j) *Beam spread*. The beam shall be at least 60 feet in diameter at 200 yards. The edge of the beam shall be defined as a point at which the intensity of the light is 10 percent of the maximum intensity.

(k) *Bolts, nuts, and screws*. Bolts and nuts shall conform to the requirements of Navy Department Specification 43B11. Screws shall conform to the requirements of Navy Department Specification 42S5.

(l) *Nameplate*. The motor lifeboat searchlight shall be provided with a permanent metallic nameplate giving the name of manufacturer, type designation, and drawing number.

§ 161.006-5 *Sampling, inspections and tests*—(a) *General*. Motor lifeboat searchlights specified by this subpart are not inspected at regularly scheduled factory inspections of production lots, but the Commander of the Coast Guard District may detail an inspector at any time to visit any place where such searchlights are manufactured to check materials and construction methods and to conduct such tests and examinations as may be required to satisfy himself that the searchlights are being manufactured in compliance with the requirements of this specification and with the manufacturer's plans and specifications approved by the Commandant.

(b) *Methods of test*—(1) *Waterproof test*. The searchlight shall be subjected for 5 minutes to a stream of water under a head of approximately 35 feet from a hose not less than 1 inch in diameter from a distance of approximately 10 feet. The hose nozzle shall be adjusted to give a solid stream at the enclosure. No leakage shall occur in this test.

(2) *Beam candlepower*. All light except that produced from the searchlight under test shall be excluded from the room in which measurements are made. The searchlight shall be operated at rated voltage with a seasoned lamp as specified in § 161.006-4 (e). Measurements of beam candlepower shall be made at the corners of a 6-inch square located in the center of the beam at a distance of 32 feet immediately in front of the searchlight.

(3) *Corrosion resistance*. The searchlight shall be subjected to a 200-hour salt spray test in accordance with A. S. T. M. Standard B117-44T. There shall be no evidence of corrosion that will be detrimental to the operation of the searchlight.

(4) *Heat run*. The searchlight, completely assembled, shall be operated continuously for 2 hours at rated voltage following which the waterproof test shall be conducted. This cycle shall be repeated 3 times. The ambient temperature shall be approximately 25° C. The water stream shall be from an ordinary cold water tap.

§ 161.006-6 *Procedure for approval*—(a) *General*. Motor lifeboat searchlights are approved only by the Commandant, United States Coast Guard, Washington 25, D. C. Correspondence relating to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Manufacturers' plans and specifications*. In order to obtain approval of motor lifeboat searchlights, submit detailed plans and specifications, including a complete bill of material, assembly drawings, and parts drawings descriptive of the arrangement and construction of the device, to the Commander of the Coast Guard District in which the factory is located. Each drawing shall have an identifying drawing number, date, and an identification of the device; and the general arrangement for assembly drawing shall include a list of all drawings applicable, together with drawing numbers and alteration numbers. The manufacturer will be advised whether or not the drawings and specifications appear satisfactory or what corrections appear necessary and then he may proceed with the construction of the pre-approval sample in accordance therewith. The pre-approval sample, together with four copies of the plans and specifications, corrected as may be required, shall be forwarded to the Commandant via the Commander of the Coast Guard District in which the factory is located for inspection and tests. The cost of the tests is to be borne by the manufacturer.

SUBPART 161.008—FLASHLIGHTS, ELECTRIC, HAND, FOR MERCHANT VESSELS

§ 161.008-1 *Applicable specifications*. (a) The following specification, of the issue in effect on the date hand electric flashlights are manufactured, forms a part of this subpart:

(1) American Standards Association:

C-18—American Standard Specification for Dry Cells and Batteries.

(b) A copy of the above specification shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

§ 161.008-2 *Types and sizes*—(a) *Types*. The flashlights shall be of the following types:

Type I—Watertight.
Type II—Explosion-proof.

(b) *Sizes*. The following sizes are covered by this specification:

Size No. 2—Two-cell.
Size No. 3—Three-cell.

§ 161.008-3 Materials and workmanship—(a) Materials. All materials used in the construction of the flashlights shall be of a quality suitable for the purpose intended and shall conform to the requirements specified in this subpart.

(1) **Plastic.** Plastic, when used, shall be from a suitable thermoplastic or thermosetting material imbedded with a suitable impregnated fabric or fiber filler. The impact strength (Izod test) shall be at least 3.0 foot pounds per inch of notch. The plastic shall be so molded as to produce a dense solid structure, uniform in texture, finish and mechanical properties. It shall be free from warpage, cracks, chipped edges or surfaces, uneven surfaces due to failure to fill out in the mold, burrs, projecting ridges at the dividing line of the mold, and evidence of porosity inclusive of areas adjacent to metal inserts.

(2) **Other materials.** The types of other permitted materials are covered in §§ 161.008-4 and 161.008-5.

(b) **Workmanship.** Workmanship shall be first class in every particular. Flashlights shall be of sturdy construction, and free from mechanical, electrical or other imperfections or defects which materially affect appearances or which may affect serviceability.

(1) Threaded parts shall be smooth and close fitting and shall be capable of being easily moved by hand relative to each other; threaded parts so fitted as to allow threads to jump or parts to change adjustment shall be avoided.

§ 161.008-4 General requirements. (a) Each flashlight shall be furnished complete with lamp and cells.

(b) Each flashlight shall be of the spotlight style providing a concentrated beam of light.

NOTE: When used in this specification, a concentrated beam of light is light projected in a nearly parallel beam, and is used to illuminate objects at considerable distances.

(c) All metal parts of each flashlight shall be made of corrosion-resistant material. All copper or copper alloy parts coming in contact with rubber shall be cadmium plated, or otherwise treated to prevent corrosion and disintegration of the rubber.

(d) Each flashlight shall be provided with means to prevent it from rolling freely when placed on a flat surface.

(e) Each flashlight shall be provided with one spare lamp which shall be contained within the case.

(f) The construction of each flashlight shall be such that a metallic contact outside the case cannot close the battery circuit.

(g) The proportions and design of each flashlight shall be such that the assembled unit, complete with lamp and cells, shall be capable of withstanding, without breakage or material distortion of any part, and without upsetting the lamp focus, the drop test specified in § 161.008-6 (b) (1). The flashlight shall be in working order upon completion of the test.

NOTE: Damage of lamp filament or shifting of filament within the lamp as a result of this test shall not be cause for rejection of the flashlight.

No. 6—4

(h) The concentrated beam of light of each flashlight when tested in accordance with § 161.008-6 (b) (3) shall be well defined, relatively uniform in intensity, and shall have a minimum peak candlepower and maximum diameter as specified in Table 161.008-4 (h).

TABLE 161.008-4 (h)

All types	Candlepower (minimum)	Beam diameter (maximum in inches)
Size No. 2.....	800	10
Size No. 3.....	1,200	10

(i) Each Type I flashlight shall be watertight, i. e., shall show no appreciable leakage of water, and shall be in perfect working order when cells are assembled therein following the test prescribed in § 161.008-6 (b) (2). The flashlight shall be capable of being disassembled and reassembled without undue difficulty upon completion of the test. The total water absorption and leakage into the flashlight during this test shall not exceed 5 percent by weight.

(j) Each Type II flashlight shall be of explosion-proof construction and shall bear the label of the Underwriters' Laboratories, Inc., as suitable for use in Class I, Group D, hazardous locations.

§ 161.008-5 Detail requirements—(a) Dimensions. The dimensions of the flashlights covered by this specification (both types) shall be in accordance with Table 161.008-5 (a).

TABLE 161.008-5 (a)

All types	Lens head ring size (dimensions across flats in inches, approximately)	Length (maximum in inches)
Size No. 2.....	2 1/4	8
Size No. 3.....	2 1/4	10 1/4

(b) **Case and lens head ring.** (1) The flashlight case shall be suitable to receive standard tubular cells, 1 1/16 inches in diameter by 2 3/8 inches long. Means shall be provided on the exterior surface of the flashlight case to effect a satisfactory grip. The number of cells per flashlight shall be as specified in § 161.008-2 (b). Cells shall be held in the case under sufficient pressure to insure good contact and to prevent breaking the circuit when the flashlight is shaken by the hand. Cells shall be readily replaceable.

(2) The case, lens head ring and end cap, shall be made of one of the following (the case, ring and cap, need not be made of the same material but cooperating threaded surfaces should be of the same material, preferably corrosion-resistant metal):

(i) Molded plastic material specified in § 161.008-3 (a) (1).

(ii) Rigid, corrosion-resistant material.

(c) **Lens.** The lens shall be of good quality laminated shatter-proof glass, or other approved equivalent material, free from bubbles, striae, wrinkles or other defects and blemishes which would af-

fect the light distribution. The lens shall be secured to the lens head ring by a suitable retaining ring or other device, so as to prevent it from being dropped when the lens head ring is unscrewed.

(d) **Cells.** Each cell shall be of a quality to meet the requirements of flashlight cell designation D (light industrial) in accordance with the American Standards Association Specification C-18, as determined by the National Bureau of Standards Qualification Tests.

(e) **Reflector.** The reflector shall be of sheet or die-cast metal, or other approved equivalent material, and shall be not less than 1 1/4 inches in diameter. It shall have sufficient rigidity so as not to become distorted when the flashlight is completely assembled with cells and lamp. It shall have a parabolic reflecting surface, highly polished, and resistant to corrosion and discoloration.

(f) **Lamps.** The lamp used in each flashlight shall be of the prefocused type, the ratings of which are indicated in Table 161.008-5 (f).

TABLE 161.008-5 (f)

All types	Commercial trade number of lamp	Design (volts)	Current (amperes)
Size No. 2.....	FR-6	2.47	0.30
Size No. 3.....	FR-7	2.7	.30

(g) **Lamp holder.** The lamp holder shall be firmly attached to the reflector. It shall be so positioned that the lamp, when assembled in the holder, shall have its filament located at the focus of the reflector, with the accuracy necessary to produce a concentrated beam of light as specified in § 161.008-6 (b) (3). It shall have sufficient rigidity so as not to become distorted when the flashlight is completely assembled with cells and lamp. Means shall be provided to protect the lamp from damage by battery impact and for conveniently removing and replacing the lamp.

(1) The mounting adjustment shall have sufficient stability to retain the focal adjustment of the lamp under a condition of vibration, and when the flashlight is shaken by the hand.

(h) **Switch.** The switch shall be conveniently located and securely attached to the flashlight. It shall be provided with a permanent "on" position, a manually operable signaling or flashing position, and a locked "off" position. It shall be provided with means to prevent accidental closing of the lamp circuit. The switch parts and switch contact strips shall be adequately insulated so that it will be impossible for metal-clad cells to close a circuit when the switch is on the "off" position.

(1) Contact springs shall be of phosphor bronze, spring brass, or other approved corrosion-resistant equivalent material.

(2) Each switch shall be capable of 25,000 cycles of normal operation as specified in § 161.008-6 (b) (4) without mechanical or electrical failure.

(i) **Suspension member.** Each flashlight shall be equipped with a suitable suspension ring or clip.

§ 161.008-6 *Inspection and methods of test*—(a) *Inspection*. The Coast Guard reserves the right to make any inspection it deems necessary to determine the conformance of the materials and equipment to this specification.

(1) The facilities, materials, and labor for all tests shall be furnished by the manufacturer, when available, and at no cost to the Coast Guard.

(2) When testing facilities are not available at the point of inspection, samples shall be forwarded, prepaid by the manufacturer, to the Commandant, United States Coast Guard, Washington, D. C., for completion of the tests.

(b) *Methods of test*—(1) *Drop test*. The assembled flashlight, complete with cells and lamp, shall be dropped 3 times, each at a height specified in this paragraph, onto a concrete or rigid metal surface. The flashlight shall be dropped so as to strike once in an approximately horizontal position, once in a vertical position upon the head, and once in a vertical position upon the base. One sample shall be tested at a temperature between 5° F. and 0° F. and shall be dropped from a height of 3 feet, and another sample at a temperature between 145° F. and 150° F. and shall be dropped from a height of 5 feet. In each of the drop tests the temperature of the flashlight shall be the same as the temperature at which the test is conducted.

(2) *Watertightness test*. The assembled flashlight, with lamp but without cells, shall be submerged in a 3 percent solution of sodium chloride (by weight) in distilled water at a temperature of 65° F. to 70° F., under a head of 1 foot, and for a period of 24 hours. The flashlight shall then be removed and the excess water wiped off. The total water absorption and leakage shall be calculated from the measured weights of the flashlight at the start and finish of the test.

(3) *Tests for light projection requirements*—(i) *Beam characteristics*. The concentrated beam of light of the flashlight shall be projected on a screen placed at a distance of 10 feet from the lens. The plane of the screen shall be normal to the axis of the flashlight. The concentrated beam of light shall be measured for diameter and its luminous intensity distribution shall be examined.

(ii) *Peak candlepower*. The peak candlepower of the flashlight shall be measured at 10 feet distance from the exterior surface of the lens. In making this test, the lamp voltage shall be as given in Table 161.008-5 (f). The peak candlepower measurements shall be obtained by a Macbeth Illuminometer or other suitable means.

(4) *Switch fatigue test*. The switch mechanism of the flashlight shall be operated in a normal manner through 25,000 operating cycles at a rate not to exceed 15 cycles per minute. During this test the mechanism shall operate without mechanical faults, or electrical contact or other failures.

§ 161.008-7 *Marking*. (a) Each flashlight shall be marked in a plain and permanent manner with the manufac-

turer's name or with a trade mark of such known character that the source of manufacture may be readily determined.

§ 161.008-8 *Procedure for approval*—(a) *General*. Hand electric flashlights are approved only by the Commandant, United States Coast Guard, Washington 25, D. C. Correspondence relating to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Manufacturer's plans and specifications*. In order to obtain approval of hand electric flashlights, detailed plans and specifications, including a complete bill of material, assembly drawings, and parts drawings descriptive of the arrangement and construction of the device shall be submitted to the Commander of the Coast Guard District in which the factory is located. Each drawing shall have an identifying drawing number, date and an identification of the device; and the general arrangement or assembly drawing shall include a list of all drawings applicable, together with drawing numbers and alteration numbers. The manufacturer will be advised whether or not the drawings and specifications appear satisfactory or what corrections appear necessary and then he may proceed with the construction of the pre-approval sample in accordance therewith.

(c) *Pre-approval sample*. The pre-approval sample, together with four copies of the plans and specifications, corrected as may be required, shall be forwarded to the Commandant via the Commander of the Coast Guard District in which the factory is located for inspection and tests. The cost of the tests is to be borne by the manufacturer.

Dated: January 4, 1950.

[SEAL] MERLIN O'NEILL,
Vice Admiral, U. S. Coast Guard,
Commandant.

[F. R. Doc. 50-296; Filed, Jan. 10, 1950;
9:29 a. m.]

TITLE 47—TELECOMMUNICATION

Chapter I—Federal Communications Commission

PART 1—PRACTICE AND PROCEDURE

MONTHLY REPORT OF REVENUES, EXPENSES, AND OTHER ITEMS FOR CERTAIN WIRE-TELEGRAPH CARRIERS

At a session of the Federal Communications Commission held at its offices in Washington, D. C., on the 29th day of December 1949;

The Commission having under consideration the advisability of amending its F. C. C. Form No. 905A concerning items to be reported on a monthly basis; and

It appearing, that § 43.31 of the Commission's rules and regulations provides for the filing of monthly reports by carriers whose average annual operating revenues exceed \$250,000 and that F. C. C.

Form No. 905A is required by § 1.545 of the rules and regulations as the form of report to be filed by wire-telegraph carriers; and

It further appearing, that in the currently effective form 905A, items 21, 22, 25, 30, 48, and 49 provide information which the Commission finds it does not need at this time and may therefore be eliminated, items 17 and 33 are no longer effective, items 42 and 43 may be combined and account 7099 also included therewith; and

It further appearing, that two accounts relating to amounts of interest paid by carriers are of sufficient importance to be shown separately in the group entitled "Other income items"; and that the "Selected balance-sheet items" would be improved as a source of information necessary to the Commission's regulatory functions by the inclusion of "Allowance for depreciation," account 1515:01 to complement present item 47, "Operated plant in carrier's service"; and

It further appearing, that the provision of an arrangement for combining the net operating revenues of ocean-cable operations with the net operating revenues of wire-telegraph operations will avoid the need for a separate report providing such totals; and

It further appearing, that all of the proposed revisions relate to information which the affected wire-telegraph carriers are required to and will maintain during 1950 under the applicable Uniform System of Accounts; and that general notice of proposed rule making in accordance with section 4 (a) of the Administrative Procedure Act is therefore unnecessary; and

It further appearing, that previous order issued by the Commission relating to the adoption of F. C. C. Form No. 901 (Revised) and order of even date relating to the adoption of F. C. C. Form No. 903 (Revised Jan. 1950) and the rescission of F. C. C. Form No. 905B, together with the proposals herein, make necessary an appropriate amendment of § 1.545 of the Commission's rules and regulations; and

It further appearing, that authority for the proposed amendment is contained in sections 4 (i) and 219 of the Communications Act of 1934, as amended;

It is ordered, That effective May 1, 1950, F. C. C. Form No. 905A be rescinded and that F. C. C. Form 905 (Revised Jan. 1950) be substituted as indicated in the attached copy¹ thereof comprising two pages; and

It is further ordered, That effective May 1, 1950, § 1.545 of the Commission's rules and regulations is amended to read as follows:

§ 1.545 *Monthly financial reports*. Monthly reports of revenues, expenses, and other items shall be filed by carriers as required by § 43.31 of this chapter on the following forms:

F. C. C. Form No. 901 (Revised) Telephone.

¹ Filed as a part of the original document.

F. C. C. Form No. 903 (Revised Jan. 1950)
Radiotelegraph and Ocean-cable.
F. C. C. Form No. 905 (Revised Jan. 1950)
Wire-telegraph.

Provided, however, That any carrier which elects to adopt the modified accounting procedure prior to May 1, 1950, as authorized by the Commission's order of October 14, 1949, in Docket No. 9406 may file the revised F. C. C. Form 905 herein adopted, for the entire calendar year, 1950.

(Sec. 4 (1), 48 Stat. 1066; 47 U. S. C. 154 (1).
Applies 219, 48 Stat. 1077, 47 U. S. C. 219)

Released: December 29, 1949.

FEDERAL COMMUNICATIONS
COMMISSION,

[SEAL] T. J. SLOWIE,
Secretary.

[F. R. Doc. 50-249; Filed, Jan. 10, 1950;
8:56 a. m.]

PART 1—PRACTICE AND PROCEDURE

MONTHLY REPORT OF REVENUES, EXPENSES, AND OTHER ITEMS FOR CERTAIN RADIOTELE- GRAPH AND OCEAN-CABLE CARRIERS

At a session of the Federal Communications Commission held at its offices in Washington, D. C., on the 29th day of December 1949;

The Commission having under consideration the advisability of amending its F. C. C. Forms Nos. 903 and 905B, concerning items to be reported on a monthly basis; and

It appearing, that § 43.31 of the Commission's rules and regulations provides for the filing of monthly reports by radiotelegraph and ocean-cable carriers whose average annual operating revenues exceed \$250,000 and that F. C. C. Form No. 903 and F. C. C. Form No. 905B are prescribed by § 1.545 of the rules and regulations as the form of report to be filed by such radiotelegraph and ocean-cable carriers, respectively; and

It further appearing, that the adoption by the Commission on October 14, 1949, of new revenue accounts to become effective in 1950 requires the substitution of the new account titles and numbers for the designations in the present forms; and

It further appearing, that these recently authorized changes in the revenue accounts make it feasible and desirable to design a single form applicable to both types of carriers concerned herein; and

It further appearing, that in the currently effective form 903, items 20, 21, 22, 46, and 47 provide information which the Commission finds it does not need at this time and may therefore be eliminated, item 26 is no longer effective, items 40 and 41 may be combined and account 7099 also included therewith; and

It further appearing, that two accounts relating to amounts of interest paid by carriers are of sufficient importance to be shown separately in the group entitled "Other income items"; and that the "Selected balance-sheet items" would be improved as a source of information necessary to the Commission's regulatory functions by the inclusion of "Allowance for depreciation," account 1515:01 to

complement present item 45, "Operated plant in carrier's service"; and

It further appearing, that all of the proposed revisions relate to information which the affected radiotelegraph and ocean-cable carriers are required to and will maintain during 1950 under the Uniform Systems of Accounts respectively applicable; and that general notice of proposed rule making in accordance with section 4 (a) of the Administrative Procedure Act is therefore unnecessary; and

It further appearing, that authority for the proposed amendment is contained in sections 4 (1) and 219 of the Communications Act of 1934, as amended;

It is ordered, That effective May 1, 1950, F. C. C. Form No. 905B be rescinded and that F. C. C. Form No. 903 be revised as indicated in the attached copy of F. C. C. Form No. 903 (Revised January 1950)¹ comprising two pages: *Provided, however,* That any carrier which elects to adopt the modified accounting procedure prior to May 1, 1950, as authorized by the Commission's orders of October 14, 1949, in Docket Nos. 9370 and 9406 may file the revised F. C. C. Form 903 (Revised January 1950) herein adopted, for the entire calendar year, 1950.

(Sec. 4 (1), 48 Stat. 1066; 47 U. S. C. 154 (1).
Applies 219, 48 Stat. 1077; 47 U. S. C. 219)

Released: December 29, 1949.

FEDERAL COMMUNICATIONS
COMMISSION,

[SEAL] T. J. SLOWIE,
Secretary.

[F. R. Doc. 50-250; Filed, Jan. 10, 1950;
8:56 a. m.]

PROPOSED RULE MAKING

DEPARTMENT OF AGRICULTURE

Production and Marketing Administration

HOBART SALES DAY ASSN., INC.

POSTING OF STOCKYARD

The Secretary of Agriculture has information that the Hobart Sales Day Association, Inc., Hobart, Oklahoma, is a stockyard as defined in section 302 of the Packers and Stockyards Act, 1921, as amended (7 U. S. C. 202), and should be made subject to the provisions of that act.

Therefore, notice is hereby given that the Secretary of Agriculture proposes to issue a rule designating the stockyards named above as a posted stockyard subject to the provisions of the Packers and Stockyards Act, 1921, as amended (7 U. S. C. 181 et seq.), as is provided in section 302 of that act. Any interested person who desires to do so may submit within 15 days of the publication of this notice any data, views or argument, in writing, on the proposed rule to the Director, Livestock Branch, Production and Marketing Administration, United States Department of Agriculture, Washington 25, D. C.

Done at Washington, D. C., this 6th day of January 1950.

[SEAL] H. E. REED,
Director, Livestock Branch, Pro-
duction and Marketing Ad-
ministration.

[F. R. Doc. 50-261; Filed, Jan. 10, 1950;
8:56 a. m.]

INTERSTATE COMMERCE COMMISSION

[49 CFR, Part 136]

[Ex Parte 171]

RULES, STANDARDS AND INSTRUCTIONS FOR
INSTALLATION, MAINTENANCE AND REPAIR
OF AUTOMATIC BLOCK SIGNAL SYSTEMS,
INTERLOCKING, TRAFFIC CONTROL SYS-
TEMS, AUTOMATIC TRAIN STOP, TRAIN
CONTROL, AND CAB SIGNAL SYSTEMS, AND
OTHER SIMILAR APPLIANCES, METHODS
AND SYSTEMS

NOTICE OF PROPOSED RULE MAKING

JANUARY 6, 1950.

Investigation will be conducted by the Commission in the above-entitled proceeding.

Nature of investigation. The investigation is for the purpose of revising, amending, and modifying the rules, standards and instructions for Installation, Maintenance and Repair of Automatic Block Signal Systems, Interlocking, Traffic Control Systems, Automatic Train Stop, Train Control, and Cab Signal Systems, and other Similar Appliances, Methods and Systems, prescribed by the Commission's order of April 13, 1939.

Authority for investigation. The investigation is made pursuant to the provisions of section 25 of the Interstate Commerce Act.

Reasons for investigation. The present rules, standards, and instructions have been in effect for more than ten years. Experience has shown that some of them should be eliminated and others clarified, and that in some respects said rules, standards, and instructions are incomplete and inadequate to carry out the purposes of section 25 of the Interstate Commerce Act.

Proposed rules, standards, and instructions. The rules, standards and instructions tentatively proposed as a substitute for the rules, standards, and

¹ Filed as a part of the original document.