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arrangement. Alternate types, arrangements or materials, which meet the performance requirements of this subpart will be given special consideration.

(b) *Sizes.* Bilge pumps covered by this subpart shall be of three sizes, having capacities as follows:

(1) *Size No. 1.* 5 gallons per minute at 65 double strokes,¹ for lifeboats up to 330 cubic feet capacity.²

(2) *Size No. 2.* 6 gallons per minute at 50 double strokes, for lifeboats from 330 cubic feet up to 700 cubic feet capacity.

(3) *Size No. 3.* 15 gallons per minute at 50 double strokes, for lifeboats of 700 cubic feet or more capacity.

§ 160.044-3 General requirements.

(a) Bilge pumps shall be of rugged construction, of first class workmanship in every respect, and free from any defects affecting serviceability. Where a choice of materials is permitted, the materials used shall be of good quality and suitable for the purpose intended, and shall be corrosion-resistant or protected against corrosion by acceptable means, except that parts subject to wear shall not depend upon coatings for corrosion resistance.

(b) Bilge pumps covered by this subpart shall be capable of operating against a head pressure of 20 pounds per square inch when tested in accordance with § 160.044-4(c).

(c) The bilge pump body shall be of bronze and shall be provided with a cover plate or plates, attached by means of wing nuts at least 1¼ inches long, on not more than 6 studs, or by means of a suitable bayonet type joint, so as to be readily removable for inspection or cleaning.

(d) The operating lever shall have a steel or bronze core through its entire length, but for comfort may have a gripping surface of wood or other suitable material. The lever shall be removable and shall be attached to the pump shaft which is to be square

¹A double stroke is a complete cycle from one extreme to the other and back again to the original starting point, or, for rotary type, one complete revolution.

²The capacity of a lifeboat for determining the size of the bilge pump shall be 0.6 times the product of the length, breadth, and depth of the lifeboat, in feet.

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ended, by means of a set screw with 1¼-inch wings, and further shall be connected to the pump body or shaft end by a retaining chain to prevent loss.

(e) The suction line shall be fitted with an intake check valve and a suitable strainer. The strainer shall be removable for cleaning without the use of tools. The suction line shall contain no hose or fittings subject to collapsing when the pump is in service.

(f) Suction and discharge outlets shall be not less than 1 inch inside diameter for pump sizes Nos. 1 and 2, and not less than 1¼ inches inside diameter for pump size No. 3. Discharge outlets shall be provided with a tee of cast bronze or other corrosion-resistant material, with a removable plug at the top for priming, the plug to have a wing arrangement for removal by hand, and be secured to the tee by a retaining chain. The bottom of the tee shall have pipe threads to fit the discharge outlet of the pump, and the discharge portion of the tee shall be a plain clamp type male hose connection, with inside diameter not less than that of the pump discharge opening.

§ 160.044-4 Inspection and tests.

(a) *Capacity.* The bilge pump being tested shall be set up over a source of water for operation with all the required fittings and connections, the set-up to simulate an installation in a lifeboat. The bilge pump shall be operated at the standard speed specified for its size, and the flow of water measured. The amount of water discharged shall not be less than that required by § 160.044-2(b).

(b) *Head pressure.* After the successful completion of the test outlined in paragraph (b) of this section, a pressure gage capable of registering 20 pounds per square inch, and a variable restriction, such as a nozzle, valve, etc., shall be fitted in the discharge line. The pump shall be put in operation with the discharge line open, and then the restriction shall be gradually closed until the pressure builds up to at least 20 pounds per square inch. This pressure shall be maintained for at least 15 seconds, after which the pump shall be

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disassembled and inspected. No destruction or deformation of parts sufficient to affect the serviceability of the pump shall be permitted as a result of this test.

(c) *Operating lever.* With the pump firmly secured in such a position that both the shaft and operating lever are in a horizontal position, apply a downward load of 200 pounds for a period of 5 minutes at the free end of the operating lever and perpendicular to its axis and the axis of the shaft. There shall be no slippage of the lever around the shaft, nor any evidence of permanent set or undue stress in any part of the pump. In cases where the design of the pump is such that this test may not be applicable to the complete pump, the pump shall be disassembled and the 200-pound load applied to the shaft and operating lever while the free end of the shaft is held in a vise or check so that both the shaft and the operating lever are in a horizontal position.

[CGFR 65-9, 30 FR 11467, Sept. 8, 1965, as amended by CGD 95-028, 62 FR 51213, Sept. 30, 1997]

§ 160.044-5 Marking.

(a) Each pump shall be permanently and legibly marked, in letters not less than $\frac{1}{4}$ inch high, either cast or stamped on the body, with the name of the manufacturer, the size for which approved (USCG No. 1, 2 or 3), and the Coast Guard approval number. The tee required by § 160.044-3(f) shall be permanently and legibly marked with the word "PRIME HERE".

(b) [Reserved]

Subpart 160.047—Specification for a Buoyant Vest, Kapok or Fibrous Glass, Adult and Child

§ 160.047-1 Incorporation by reference.

(a) *Specifications and Standards.* This subpart makes reference to the following documents:

(1) Federal Specification:

L-P-375C—Plastic Film, Flexible, Vinyl Chloride.

(2) Military specifications:

MIL-W-530—Webbing, Textile, Cotton, General Purpose, Natural or in Colors.

MIL-B-2766—Batt, Fibrous Glass, Lifesaving Equipment.

(3) Federal Standards:

No. 191—Textile Test Methods.

751A—Stitches, Seams, and Stitchings.

(4) Coast Guard specification:

164.003—Kapok, Processed.

(b) *Plans.* The following plans, of the issue in effect on the date buoyant vests are manufactured, form a part of this subpart:

Dwg. No. 160.047-1:

Sheet 1, Rev. 2—Cutting Pattern and General Arrangement, Models AK-1, and AF-1.

Sheet 2, Rev. 2—Cutting Pattern and General Arrangement, Models CKM-1 and CFM-1.

Sheet 3, Rev. 2—Cutting Pattern and General Arrangement, Models CKS-1 and CFS-1.

Sheet 4, Rev. 1—Pad Patterns.

(c) *Copies on file.* The manufacturer shall keep a copy of each specification and plan required by this section on file together with the certificate of approval. Plans and specifications may be obtained as follows:

(1) The Coast Guard plans and specifications may be obtained from the Commandant (G-MSE), U.S. Coast Guard, Washington, DC 20593-0001 or a recognized laboratory listed in § 160.047-6b.

(2) The Federal Specifications and Standard may be purchased from the Business Service Center, General Services Administration, Washington, DC 20407;

(3) The military specifications may be obtained from the Commanding Officer, Naval Supply Depot, 5801 Tabor Avenue, Philadelphia, PA 19120.

[CGD 65-37, 30 FR 11581, Sept. 10, 1965, as amended by CGD 72-90R, 37 FR 10836, May 31, 1972; CGD 78-012, 43 FR 27153, 27154, June 22, 1978; CGD 82-063b, 48 FR 4782, Feb. 3, 1983; CGD 88-070, 53 FR 34535, Sept. 7, 1988; CGD 95-072, 60 FR 50467, Sept. 29, 1995; CGD 96-041, 61 FR 50733, Sept. 27, 1996]

§ 160.047-2 Model.

Each buoyant vest specified in this subpart is a:

(a) Model AK-1, adult, kapok (for persons weighing more than 90 pounds);