

then be hauled outboard a horizontal distance of 8 feet from its original position. From this point, the boat shall be allowed to freely swing inboard and strike the wall along one side. There shall be no damage which would render the boat unserviceable.

(4) *Drop test.* The boat shall be loaded with weights equal to the full weight of all equipment, food, water and persons to be carried. The boat shall then be suspended freely from the releasing gear and shall be dropped in a free fall into the water from a height of 10 feet. There shall be no damage which would render the boat unserviceable.

(5) *Thwart test.* A 200-pound sand bag shall be dropped from a height of 6 feet on the center of each thwart span. The thwarts shall not fracture or otherwise be rendered unserviceable.

(6) *Towing test.* With a towline rigged around the forward thwart in the same manner as the sea painter is normally rigged, the fully loaded lifeboat shall be towed at least 1,000 yards at a speed of not less than 5 knots. The boat shall exhibit satisfactory towing characteristics and there shall be no appreciable damage to the thwart.

(7) *Tanks and lockers.* Equipment tanks and watertight lockers shall be tested with not less than 1.0 p.s.i. of air pressure both before and after the tests described in paragraphs (b)(1) through (6) of this section.

§ 160.035-13 Testing and inspection after approval.

(a) *General.* After the design of a lifeboat has been approved, subsequent lifeboats of the same design shall be individually inspected and tested as noted in §160.035-11(a) for metal lifeboats and paragraph (b) of this section for FRP. lifeboats. In addition, motors and band-propelling gear when installed shall be operated in the "ahead", "neutral", and "astern" positions. If mechanical disengaging apparatus is fitted, it shall be tested by suspending the lifeboat loaded with dead-weight equivalent to the number of persons allowed in the lifeboat (165 pounds per person) together with the weight of the equipment, plus 10 percent of the total load, including the weight of the lifeboat. The release lever shall then be thrown over with

this load suspended until the lifeboat is released. The apparatus shall be capable of being operated freely by one man, without the use of aids or undue force to the satisfaction of the marine inspector. (This test may be conducted ashore by suspending the lifeboat just clear of the ground.)

(b) *Additional production inspection and tests for FRP. lifeboats—(1) Inspection requirements.* Each production model fibrous glass reinforced plastic lifeboat shall as a condition to its being accepted as Coast Guard approved equipment, be examined by a marine inspector at the following stages in its manufacture:

(i) When the major, individual components of the shell and inner hull or buoyancy casing are completed but before they are assembled together. At this stage the marine inspector shall satisfy himself that these components comply with the approved plans and specifications by visual inspection, thickness measurements and comparison of the weights of the components with the weights recorded for the same components in the prototype.

(ii) At the time the internal buoyancy is installed. If block plastic foam is used, it shall be inspected after it has been cut to size and shaped but before it is inserted and covered. The installation shall be completed in the presence of the marine inspector and he shall verify that the required amount is used by weighing the material. If foamed-in-place plastic foam is used, the marine inspector shall be present during the foaming operation. A sample of the foam shall be retained outside the boat and when it sets it shall be used to make a density determination of the material.

(iii) When the boat is completed. At this stage the marine inspector shall check the scantlings of the minor components and the overall compliance with the plans. The manufacturer shall certify that the materials used are in accordance with the approved bill of materials.

(2) *Test requirements.* After the inspections listed in paragraph (b)(1) of this section are completed, the following tests are to be carried out to the satisfaction of the marine inspector:

(i) The boat shall be suspended freely from the releasing gear and the length, breadth and depth measured. The boat shall then be flooded with water equal to 1½ times the weight of the boat, persons, equipment, and provisions and fuel (if motor driven) less the weight of the boat. This is represented by the following formula:

$$\text{Water added} = 1.5 \times (\text{empty boat} + \text{equipment} + \text{provisions} + \text{fuel} + \text{people}) - \text{empty boat}$$

The length, breadth and depth shall be measured in this loaded condition and, again, after the load has been removed. The loaded deflections and the permanent deformations shall not significantly exceed those recorded for the prototype in the pre-approval tests. Also, while flooded, the exterior of the hull shall be examined for leaks or other defects. After the boat is drained, the attachment of the release gear shall be carefully examined.

(ii) All provision tanks shall be tested by a static head above the tank top of 2 feet of water without showing leakage or permanent deformation.

(iii) The plastic fuel tanks shall be tested by a static head above the tank top of 10 feet of water without showing leakage or permanent deformation.

(c) *Marking.* (1) A corrosion resistant nameplate shall be affixed at the bow of each lifeboat on which is stamped the name of the manufacturer, serial number, approval number, dimensions of the lifeboat, cubic capacity, buoyancy capacity, net weight of the boat in Condition A and Condition B, the number of persons for which the lifeboat is approved, together with the Marine Inspection Office identification letters, the date, and the letters U.S.C.G. *Condition A* includes buoyancy and water tanks and provision stowage compartments but no equipment, provisions, water or persons. *Condition B* includes full required provisions and equipment, persons allowed at 10 cubic feet or by seating test whichever is less at 165 pounds and 3 quarts of water (6.25 pounds)—per person.

[CGFR 65-9, 30 FR 11467, Sept. 8, 1965, as amended by CGD 72-133R, 37 FR 17040, Aug. 24, 1972; CGD 75-186, 41 FR 10437, Mar. 11, 1976]

§ 160.035-14 Procedure for approval of lifeboats.

(a) Before action is taken on any design of lifeboat, plans covering fully the arrangement and construction of the lifeboat, material specifications, together with a lines drawing, stowage arrangement, seating arrangement, and other details shall be submitted to the Commandant through the Commander of the Coast Guard District in which the lifeboat is built. The plans for approval must be detailed to a degree that the lifeboat can be constructed from the plans submitted.

(b) If the drawings required in paragraph (a) of this section are satisfactory, the manufacturer shall notify the Commander of the Coast Guard District in which the lifeboat is built in writing when fabrication is to commence. A marine inspector will be assigned to witness the construction procedure in accordance with the plans, verify the tests required by §160.035-11 for metal lifeboats and §160.035-12 for additional tests required for F.R.P. lifeboats. Also, the manufacturer shall provide the necessary tools and facilities required to conduct the tests. The Coast Guard shall have the right to require such other additional tests as reasonably may be deemed necessary, either with the completed boat or component parts, depending upon the particular construction methods and materials used by the builder, or any unusual conditions or circumstances which may arise during the construction or testing.

(c) At the time that the tests are successfully completed, the manufacturer shall present to the marine inspector four corrected copies of the plans noted in paragraph (a) of this section, 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) Upon receipt of corrected drawings and satisfactory test reports, the Commandant will issue a certificate of approval. No change shall be made in the design or construction without first receiving permission of the Commandant via the Commander of the