§ 160.035–2 General requirements for lifeboats.

(a) The requirements of this subpart apply to all new construction. Lifeboats approved and in use prior to the regulations in this subpart may be continued in service if in satisfactory condition.

(b) All lifeboats must be properly constructed and shall be of such form and proportions that they shall be readily maneuverable, have ample stability in a seaway, and sufficient freeboard when fully loaded with their full complement of persons and equipment. All lifeboats shall be capable of maintaining positive stability when open to the sea and loaded with their full complement of persons and equipment. All lifeboats must be open boats with rigid sides having internal buoyancy only. Lifeboats with a rigid shelter may be approved, provided that it may be readily opened from both inside and outside, and does not impede rapid embarkation and disembarkation or the launching and handling of the lifeboat.

(c) Lifeboats may be constructed of steel, aluminum, fibrous glass reinforced plastic (FRP), or other materials receiving specific approval: Provided, That, the weight of the fully equipped and loaded lifeboat shall not exceed 44,800 pounds, and the carrying capacity calculated in accordance with §160.035–9 of this specification shall not exceed 150 persons.

(d) For the purpose of calculations and conducting tests, the weight of the persons shall be taken at 165 pounds each.

§ 160.035–3 Construction of steel oar-propelled lifeboats.

(a) Type. Lifeboats shall have rigid sides and be fitted with internal buoyancy so arranged that the boats will float in the flooded condition when fully loaded with persons and equipment. The capacity of an oar-propelled lifeboat is limited to a maximum of 59 persons. Lifeboats designed to carry 60, but not more than 100, persons shall be either hand-propelled or motor-propelled. Lifeboats designed to carry more than 100 persons shall be motor-propelled, except that a lifeboat designed to carry more than 100 persons may be hand-propelled if it is a replacement for a previously approved hand-propelled lifeboat.

(b) Materials. (1) Plating for shell, floors, air tanks, etc., must be in accordance with ASTM A 653, Coating Designation G90 (incorporated by reference, see §160.035–1). The bend test required by these specifications must be made after the galvanizing or other anticorrosive treatment has been applied.

(2) Rivets and rolled or extruded shapes such as keel, stem, sternpost, gunwales, etc., shall be made by the open-hearth or electric furnace process in accordance with ASTM Standard Specification A 36 (incorporated by reference, see §160.035–1). Consideration will be given to the use of other steels having equivalent strength where longitudinal cold forming is necessary.

(c) Riveting. (1) Riveting of the shell plating to the keel, stem, and sternpost shall be button head rivets, staggered with not less than 12 rivets to the foot. The distance from the edge of the plate to the centers of the rivets in the nearest row shall be not less than 1/2 inch nor more than 3/4 inch. Rivets connecting the shell to the gunwale shall be spaced not more than 3 inches on centers. The size of the rivets for connecting the shell plating to the keel, stem, sternpost, and gunwale shall be
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1/4-inch diameter for boats 28 feet and under and 5/16-inch diameter for boats over 28 feet.

(2) The connection of the floors to the shell shall be a single row of rivets not less than 3/16 inch in diameter and spaced not more than 3 inches on centers.

(d) Welding. Welding may be substituted for riveting in any location. It shall be performed by welders qualified by the U.S. Coast Guard, American Bureau of Shipping, or U.S. Navy Department and only approved electrodes shall be used. Details of the joints shall be indicated on the construction drawings submitted for approval.

(e) Gunwale braces. (1) The gunwale braces shall be bolted to the thwarts with at least two carriage bolts of a size not less than that noted in table 160.035–3(e)(1) and riveted or welded to the gunwales. Where riveted to the gunwale, at least two rivets of a size not less than that noted in table 160.035–3(e)(1) shall be used.

<table>
<thead>
<tr>
<th>Length of lifeboat</th>
<th>Brace size (inches)</th>
<th>Bolts and rivets diameter (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 feet and under</td>
<td>3 x 3/16</td>
<td>5/16</td>
</tr>
<tr>
<td>Over 22 feet and not over 28.</td>
<td>3 x 5/16</td>
<td>3/8</td>
</tr>
<tr>
<td>Over 28 feet</td>
<td>3 x 3/8</td>
<td>5/16</td>
</tr>
</tbody>
</table>

(2) Bracket type gunwale braces will be given special consideration.

(f) Seats. (1) The thwarts, side benches, and end benches shall be of fir, yellow pine, fibrous glass reinforced plastic (FRP), or approved equivalent.

(2) The edges of all thwarts, side, and end benches shall be well rounded.

(3) Suitable foot rests shall be furnished at a distance of between 17 and 20 inches below the thwarts and side benches. This may be accomplished by raising the footings from the bottom of the boat.

(4) The leading edge of the thwart or end bench shall be located a minimum of 3 inches and a maximum of 6 inches distance from the Rottmer release gear.

(g) Stretchers. Stretchers of sufficient size and strength shall be fitted in suitable positions for rowing.

(h) Disengaging apparatus. (1) Connections for the disengaging apparatus shall have a minimum factor of safety of six.

(2) For construction and capacity of disengaging apparatus, see subpart 160.033.

(i) Plugs. Each lifeboat shall be fitted with an automatic plug so designed and installed as to insure complete drainage at all times when the boat is out of the water. The automatic plug shall be provided with a cap attached to the lifeboat by a suitable chain. The location of drain plug is to be marked on the vertical surface in the vicinity of the plug below the side bench with the word “plug” in 3-inch white letters and with an arrow pointing in the direction of the drain plug.

(j) Protection against corrosion. (1) All steel or iron entering into the construction of lifeboats shall be galvanized by the hot dipped process. All fabricated pieces or sections are to be galvanized after fabrication. Other methods of corrosion prevention will be given special consideration.

(2) Where welded construction is employed, the material shall be galvanized after welding unless impractical to do so in which case consideration will be given to equivalent protection.

(3) Provisions shall be made to obtain a satisfactory bond between the metal and the paint.

(k) Rudders. (1) Each lifeboat shall be fitted with a rudder and tiller. The rudder shall be fitted with a 1/2-inch diameter manila lanyard of such length as to permit the rudder to be shipped without untying the lanyard.

(2) A suitable hinged or pivoted tiller shall be provided.

(3) Rudder stops shall be provided to limit the rudder angle to approximately 45 degrees each side of the centerline.

(l) Buoyancy tanks. (1) All lifeboats shall have inherent buoyancy, or shall be fitted with buoyancy tanks or other equivalent noncorroding buoyancy units, which shall not be adversely affected by oil or oil products, sufficient to float the boat and its equipment when the boat is flooded and open to the sea. An additional volume of buoyancy, or buoyancy units, equal to at least one-tenth the cubic capacity of the lifeboat shall be provided.

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§ 160.035–5 Construction of steel motor-propelled lifeboats with and without radio cabin.

(a) General provisions applicable to all motor-propelled lifeboats. (1) A motor-propelled lifeboat, carried as part of the lifesaving equipment of a vessel, whether required or not, shall comply with all the requirements for an oar-propelled lifeboat, and in addition,