

(19) *Painter/painter release.* Each rescue boat must be fitted with a device to secure the painter near the bow of the rescue boat. The device must be arranged such that the rescue boat does not exhibit unsafe or unstable characteristics when being towed by the ship with the ship underway at 5 knots. A quick-release device must be provided, which allows the painter to be released from inside the rescue boat while under tension. The quick-release handle must be clearly identified by a label.

(20) *Canopy lamp.* Any exterior rescue boat position-indicating light must be approved by the Commandant under approval series 161.101.

(21) *Manually controlled interior light.* Any interior light must be approved by the Commandant under approval series 161.101.

(22) *Manual bilge pump.* Each rescue boat that is not automatically self-bailing must be fitted with a manual bilge pump approved under 46 CFR part 160, subpart 160.044, or an engine-powered bilge pump.

(23) *Labels and notices.* Any labels, caution and danger notices, and any operating, maintenance, or general instructions, must be in accordance with ASTM F 1166, Section 15, in terms of format, content, lettering size and spacing, color, and posted location. They must be illustrated with symbols in accordance with IMO Res. A.760(18) (incorporated by reference, see § 160.156-5 of this subpart), as applicable. Information and instruction plates, not specifically mentioned in this section, must not be posted in the vicinity of the control and steering station without prior approval from the Commandant. Identification label plates, if required, must be posted on or above the component or equipment to be identified.

(24) *Stowage.* Each stowage compartment must be supported and secured against movement. It must have adequate hand access for removing and storing the required equipment, and for cleaning the inside of the compartment. There must be sufficient stowage volume to store the equipment required by 46 CFR 199.175.

(25) *Rescue boat equipment.* The rescue boat must be designed to accommodate

and carry the equipment required by 46 CFR 199.175.

(26) *Exterior color.* The primary color of the exterior of the hull, exterior of any canopy or bow cover, and the interior of a rescue boat not covered by a canopy or bow cover must be a highly visible color equivalent to vivid reddish orange color number 12197 of FED-STD-595C, or a durable fluorescent color of a similar hue.

(27) *Navigation light.* Each rescue boat must have navigation lights that are in compliance with the applicable sections of the International and Inland Navigation Rules and meet 46 CFR 111.75-17.

(28) *Retroreflective material.* The exterior of each rescue boat and canopy must be marked with Type II retroreflective material approved under 46 CFR part 164, subpart 164.018. The arrangement of the retroreflective material must comply with IMO Res. A.658(16) (incorporated by reference, see § 160.156-5 of this subpart).

(c) Determinations of equivalence of design, construction, and materials will be made by the Commandant only.

[USCG-2010-0048, 76 FR 62999, Oct. 11, 2011, as amended by 79 FR 44140, July 30, 2014]

§ 160.156-9 Preapproval review.

(a) Except as provided in paragraph (c) of this section, the Commandant must conduct the preapproval review, required by this section, in accordance with 46 CFR 159.005-5.

(b) *Manufacturer requirements.* To seek Coast Guard approval of a rescue boat, the manufacturer must submit an application to the Commandant meeting the requirements of 46 CFR 159.005-5 for preapproval review. To meet the requirements of 46 CFR 159.005-5(a)(2), the manufacturer must submit in triplicate—

(1) A list of drawings, specifications, manuals, and any other documentation submitted, with each document identified by number, title, revision issue, and date;

(2) General arrangement and assembly drawings, including principal dimensions;

(3) Seating-arrangement plan, including a dimensioned seat form to scale;

(4) A complete material list, with each material referenced to a U.S. national standard or, if a copy is provided in English, an equivalent international standard;

(5) Plans for carriage and, in detail, stowage of equipment;

(6) Hull, canopy, and critical parts lay-up schedule for Fiber Reinforced Plastic (FRP) rescue boats, including fast rescue boats;

(7) Hull and canopy construction drawings, including particulars of joints, welds, seams, and other fabricating details;

(8) Weights and thickness of each major FRP structural component, including the hull, canopy, and inner liners, before outfitting;

(9) Specification and identification of materials such as steel, aluminum, resin, foam, fiberglass, coated fabric, and plastic used in the rescue boat's manufacture;

(10) Fabrication details for each major structural component, including details of each welded joint;

(11) Lines plans;

(12) Propulsion system specifications and arrangement and installation drawings;

(13) Steering system drawings and specifications;

(14) Release mechanism installation drawings and the mechanism's Coast Guard approval number;

(15) Plans for critical subassemblies;

(16) Hydraulic systems drawings and specifications, if installed;

(17) Electrical system schematics and specifications;

(18) Stability data, including righting arm curves in the light load and load condition for both intact and flooded;

(19) Drawings of all signs and placards, showing actual inscription, format, color, size, and location on the rescue boat;

(20) Complete data pertinent to the installation and use of the proposed rescue boat, including—

(i) The light load (condition A) and full load (condition B) weights; and

(ii) Complete details of the lifting arrangement to include enough detail for operators of the rescue boat to select a suitable release mechanism approved under subpart 160.133 or 160.170 of this part;

(21) An operation, maintenance, and training manual as described in §§160.156-19 and 160.156-21 of this subpart;

(22) A description of the quality control procedures and record keeping that will apply to the production of the rescue boat, which must include but is not limited to—

(i) The system for checking material certifications received from suppliers;

(ii) The method for controlling the inventory of materials;

(iii) The method for checking quality of fabrication, seams, and joints, including welding inspection procedures; and

(iv) The inspection checklists used during various stages of fabrication to assure that the approved rescue boat complies with the approved plans and the requirements of this subpart;

(23) Full details of any other unique capability;

(24) Any other drawing(s) necessary to show that the rescue boat complies with the requirements of this subpart;

(25) The location or address of all manufacturing sites, including the name and address of any subcontractors, where the rescue boat will be constructed; and

(26) The name of the independent laboratory that will perform the duties prescribed in §§160.156-11 and 160.156-15 of this subpart.

(c) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may conduct preapproval review required by this section so long as the preapproval review is conducted in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(d) *Plan quality.* The plans and specifications submitted to the Commandant under this section must—

(1) Be provided in English, including all notes, inscriptions, and designations for configuration control;

(2) Address each of the applicable items in paragraph (b) of this section in sufficient detail to show that the rescue boat meets the construction requirements of this subpart;

(3) Accurately depict the proposed rescue boat;

(4) Be internally consistent;
 (5) Be legible; and
 (6) If reviewed by an independent laboratory under paragraph (c) of this section, include the independent laboratory's attestation that the plans meet the quality requirements of this section.

(e) *Alternatives.* Alternatives in materials, parts, or construction, and each item replaced by an alternative, must be clearly indicated as such in the plans and specifications submitted to the Commandant under this section.

(f) *Coast Guard review.* If the plans or specifications do not comply with the requirements of this section, Coast Guard review may be suspended, and the applicant notified accordingly.

[USCG–2010–0048, 76 FR 62999, Oct. 11, 2011, as amended by 79 FR 44140, July 30, 2014]

§ 160.156–11 Fabrication of prototype rescue boats and fast rescue boats for approval.

(a) If the manufacturer is notified that the information submitted in accordance with § 160.156–9 of this subpart is satisfactory to the Commandant, the manufacturer may proceed with fabrication of the prototype rescue boat as set forth in this section.

(b) Unless the Commandant directs otherwise, an independent laboratory must perform or witness, as appropriate, inspections, tests, and oversight required by this section. Prototype inspections and tests of a rescue boat must be carried out in accordance with the procedures for independent laboratory inspection in 46 CFR part 159, subpart 159.007 and in this section, unless the Commandant authorizes alternative tests and inspections. The Commandant may prescribe additional prototype tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(c) Fabrication of a rescue boat must proceed in the following sequence:

(1) The manufacturer must arrange for an independent laboratory (or Coast Guard inspector if required under paragraph (b) of this section) to inspect, test, and oversee the rescue boat during its fabrication and prepare an inspection and test report meeting the requirements of 46 CFR 159.005–11.

(2) The independent laboratory must make such inspections as are necessary to determine that the prototype is constructed by the methods and with the materials specified in the plans reviewed under § 160.156–9 of this subpart. By conducting at least one inspection during its construction, the independent laboratory must determine the prototype rescue boat conforms with those plans by inspecting—

(i) *Fiber Reinforced Plastic (FRP) Construction.*

(A) FRP components of each prototype rescue boat outer hull and any FRP inner hull or liner components that are bonded or bolted to the outer hull must have a layup made of unpigmented clear resins so that details of construction are visible for inspection. Test panels representative of each prototype layup must be tested in accordance with MIL–P–17549D(SH) (incorporated by reference, see § 160.156–5 of this subpart). If an accepted MIL–R–21607E(SH) Grade B resin is used for the prototype rescue boat, additives for fire retardancy must not be used so that the laminate is translucent for inspection purposes. A prototype test rescue boat with Grade B resins will not be marked in accordance with § 160.156–17 of this subpart for use as a production rescue boat regardless of the outcome of the performance tests. Whichever accepted resin the manufacturer decides to use for the prototype rescue boat, the same resin must be used in the production rescue boats.

(B) The hull, canopy, and major structural laminates of each prototype FRP rescue boat must be tested for resin content, ultimate flexural strength, and tensile strength. The test samples must be cut out from the prototype rescue boat, or be laid up at the same time, using the same procedures and by the same operators as the laminate used in the rescue boat. The number of samples used for each test, and the conditions and test methods used, must be as per the applicable test specified in this paragraph. The resin content must be determined as per ASTM D 2584 or ISO 1172 (incorporated by reference, see § 160.156–5 of this subpart). The flexural ultimate strength must be determined by ASTM D 790 method I (test condition “A”, flatwise, dry) or