

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Parts 108, 117, 133, 160, 164, 180, and 199

[USCG–2010–0048]

RIN 1625–AB15

Lifesaving Equipment: Production Testing and Harmonization With International Standards

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard proposes to amend its regulations for certain lifesaving equipment, including launching appliances (winches and davits), release mechanisms, survival craft (lifeboats, inflatable liferafts, and inflatable buoyant apparatuses), rescue boats, and automatic disengaging devices. The proposed rules would harmonize the Coast Guard's design, construction, and performance standards for this lifesaving equipment with international standards. In addition, the proposed rules would provide for the use of qualified independent laboratories, instead of Coast Guard inspectors, during the approval process and for production inspections of certain types of lifesaving equipment.

DATES: Comments and related material must either be submitted to our online docket via <http://www.regulations.gov> on or before November 29, 2010 or reach the Docket Management Facility by that date. Comments sent to the Office of Management and Budget (OMB) on collection of information must reach OMB on or before November 29, 2010.

ADDRESSES: You may submit comments identified by docket number USCG–2010–0048 using any one of the following methods:

(1) *Federal eRulemaking Portal:* <http://www.regulations.gov>.

(2) *Fax:* 202–493–2251.

(3) *Mail:* Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590–0001.

(4) *Hand Delivery:* Same as mail address above, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202–366–9329.

To avoid duplication, please use only one of these four methods. See the “Public Participation and Request for Comments” portion of the

SUPPLEMENTARY INFORMATION section below for instructions on submitting comments.

Collection of Information Comments: If you have comments on the collection of information discussed in section VI.C of this NPRM, you must also send comments to the Office of Information and Regulatory Affairs (OIRA), Office of Management and Budget. To ensure that your comments to OIRA are received on time, the preferred methods are by e-mail to oira_submission@omb.eop.gov (include the docket number and “Attention: Desk Officer for Coast Guard, DHS” in the subject line of the e-mail) or fax at 202–395–6566. An alternate, though slower, method is by U.S. mail to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW., Washington, DC 20503, *Attn:* Desk Officer, U.S. Coast Guard.

Viewing incorporation by reference material: You may inspect the material proposed for incorporation by reference at U.S. Coast Guard Headquarters, 2100 2ND ST SW., STOP 7126, Washington, DC 20593–7126 between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays. The telephone number is 202–372–1385. Copies of the material are available as indicated in the “Incorporation by Reference” section of this preamble.

FOR FURTHER INFORMATION CONTACT: If you have questions on this proposed rule, call Mr. George Grills, P.E., Commercial Regulation and Standards Directorate, Office of Design and Engineering Standards, Lifesaving and Fire Safety Division (CG–5214), Coast Guard, telephone 202–372–1385, or e-mail address George.G.Grills@uscg.mil. If you have questions on viewing or submitting material to the docket, call Ms. Renee V. Wright, Program Manager, Docket Operations, telephone 202–493–0402.

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I. Public Participation and Request for Comments

The Coast Guard encourages you to participate in this rulemaking by submitting comments and related materials. All comments received will be posted, without change, to <http://www.regulations.gov> and will include any personal information you have provided.

A. Submitting Comments

If you submit a comment, please include your name and address, identify the docket number for this rulemaking (USCG–2010–0048), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online, or by fax, mail or hand delivery but please use only one of these means. The Coast Guard recommends that you include your name and a mailing address, an e-mail address, or a phone number in the body of your document so that the Coast Guard can contact you if the Coast Guard has questions regarding your submission.

To submit your comment online, go to <http://www.regulations.gov> and click on the “submit a comment” box, which will then become highlighted in blue. Insert “USCG–2010–0048” in the Keyword box, click “Search”, and then click on the balloon shape in the Actions column. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope.

The Coast Guard will consider all comments and material received during the comment period. The Coast Guard may change this proposed rule in view of your comments.

B. Viewing Comments and Documents

To view comments, as well as documents mentioned in this preamble as being available in the docket, go to <http://www.regulations.gov> at any time. Enter the docket number for this rulemaking (USCG–2010–0048) in the Keyword box, and click “Search”. If you do not have access to the Internet, you may view the docket by visiting the Docket Management Facility in Room W12–140 on the ground floor of the Department of Transportation West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Coast Guard has an agreement with the Department of Transportation to use the Docket Management Facility.

C. Privacy Act

Anyone can search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review a Privacy Act notice regarding our public dockets in the January 17, 2008 issue of the **Federal Register** (73 FR 3316).

D. Public Meeting

The Coast Guard does not currently plan to hold a public meeting. But you may submit a request for one to the Docket Management Facility at the address under **ADDRESSES** explaining why one would be beneficial. If the Coast Guard determines that one would aid this rulemaking, the Coast Guard will hold one at a time and place announced by a later notice in the **Federal Register**.

II. Abbreviations

ASTM American Society for Testing and Materials
 CFR Code of Federal Regulations
 COLREG International Regulations for Preventing Collisions at Sea
 DHS Department of Homeland Security
 EPA Environmental Protection Agency
 FRP Fiber Reinforced Plastic
 GSA General Services Administration
 IMO International Maritime Organization
 ISO International Organization for Standardization
 LSA Life-saving Appliance
 MSC Maritime Safety Committee of the International Maritime Organization
 NAICS North American Industry Classification System
 NEPA National Environmental Policy Act 1969 (42 U.S.C. 4321–4370f)
 NTTAA National Technology Transfer and Advancement Act (15 U.S.C. 272 note)
 OCFM Officer in Charge, Marine Inspection
 OIRA Office of Information and Regulatory Affairs

OMB Office of Management and Budget
 SOLAS International Convention for Safety of Life at Sea, 1974, as amended
 § Section symbol
 UL Underwriters Laboratories
 USCG United States Coast Guard

III. Background

The Coast Guard is charged with ensuring that lifesaving equipment used on vessels subject to inspection by the United States meets specific design, construction, and performance standards, including those found in the International Convention for the Safety of Life at Sea, 1974, as amended, (SOLAS), Chapter III “Life-saving appliances and arrangements.” See 46 U.S.C. 3306. The Coast Guard carries out this charge through the approval of lifesaving equipment per 46 CFR part 2, subpart 2.75. The approval process includes: pre-approving lifesaving equipment designs, overseeing prototype construction, witnessing prototype testing, and monitoring production of the equipment for use on U.S. vessels. See 46 CFR part 159. At each phase of the approval process, the Coast Guard sets specific standards to which lifesaving equipment must be built and tested. Third parties, referred to as independent laboratories, sometimes assist the Coast Guard in its approval process by performing or witnessing tests and inspections, as well as witnessing production, as authorized by the Coast Guard. See, e.g., 46 CFR 160.151–13(a) (manufacturers must arrange for an independent laboratory to inspect a liferaft during fabrication). This rulemaking would revise those specific standards for launching appliances, release mechanisms, survival craft, rescue boats, and automatic disengaging devices, and expand the use of independent laboratories in the Coast Guard’s approval process.

A. International Standards

International safety standards are established by the Parties, including the United States, to SOLAS acting at the International Maritime Organization (IMO). The international standards for lifesaving equipment (IMO standards) addressed by this rulemaking implement the requirements of Chapter III of SOLAS. The IMO standards specify design, construction, performance, and testing requirements for required lifesaving equipment, including launching appliances, release mechanisms, survival craft, rescue boats, and automatic disengaging devices. The primary IMO standards implementing Chapter III of SOLAS are—

- International Life-saving Appliance Code (“LSA Code”) (IMO Resolution MSC.48(66), as amended by IMO Resolutions MSC.207(81), MSC.218(82) and MSC.272(85)); see SOLAS Chapter III, Regulation 4; and

- Revised recommendation on testing of life-saving appliances (“Recommendation on Testing”) (IMO Resolution MSC.81(70)), as amended by Resolution MSC.226(82) and Resolution MSC.274(85); see SOLAS Chapter III, Regulation 4.

The United States actively participated in the negotiations that led to the development of these IMO standards. The Coast Guard considers these IMO standards to represent the best standards for lifesaving appliances and appropriate for lifesaving appliances for all vessels subject to inspection by the United States. Since the effective date of the IMO standards, in order to facilitate international commerce with other contracting governments to SOLAS that follow IMO standards and to achieve the benefits of the increased safety of adhering to these IMO standards, the Coast Guard has decided, pursuant to 46 U.S.C. 3306 and 46 CFR 159.005–7(c), to deem compliance by U.S. flag ships with the IMO standards as compliance with Coast Guard domestic regulations.

In this rulemaking, the Coast Guard proposes to harmonize its regulations for lifesaving equipment with international standards by incorporating the IMO standards into regulations in 46 CFR part 160.

B. Independent Laboratories

The Coast Guard has a long history of recognizing the qualifications of independent laboratories, working under the Coast Guard’s oversight, to do work traditionally conducted by Coast Guard inspectors. In 1979, the Coast Guard promulgated 46 CFR part 159 establishing procedures and standards for accepting independent laboratories for witnessing or performing certain tests and conducting inspections for certain equipment and materials requiring Coast Guard approval. See 44 FR 73038 (December 17, 1979). The Coast Guard promulgated 46 CFR part 159 under the authority in 46 U.S.C. 481 (1976) (Regulations for vessels subject to Coast Guard).¹ In 1983, Congress revised

¹In 1979, the authority for 46 CFR part 159 also included 46 U.S.C. 391, which covered “vessels carrying certain cargoes in bulk.” The broader authority under 46 U.S.C. 481 covered vessels subject to inspection and certification by the United States Coast Guard and directed “the Secretary of the Department in which the Coast Guard is operating * * * shall prescribe such rules and

and recodified the maritime laws of the United States moving the relevant authority for 46 CFR part 159 to new 46 U.S.C. 3306.² See Public Law 98–89 Partial Revision of Title 45, U.S.C. “Shipping”; House Report No. 98–338 (August 1, 1983), 1983 U.S.C.C.A.N. 924, 954–53.

The authority for current 46 CFR part 159 is 46 U.S.C. 3306, which “contains broad authority to prescribe regulations for proper inspection and certification of vessels,” House Report No. 98–338 (August 1, 1983), 1983 U.S.C.C.A.N. 924, 954–53, including the specific requirement to prescribe regulations to carry out the statutory requirements “in the most effective manner,” 46 U.S.C. 3306(a). The Coast Guard still finds the use of independent laboratories in the Coast Guard’s approval process to be “the most effective manner” of executing and carrying out its obligations under section 3306.

Independent laboratories, accepted by the Coast Guard under 46 CFR part 159, assist the Coast Guard in its approval process by performing certain tests and conducting certain inspections required for Coast Guard approval of equipment and materials. When performing and conducting tests, independent laboratories must follow Coast Guard standards and procedures, and may deviate from those standards and

regulations as may be necessary for vessels subject to inspection and certification by the United States Coast Guard with respect to the following matters: (1) Lifesaving equipment, including but not limited to, the number, type, size, capacity, details of construction, methods of operation, stowage, maintenance, manning, use, testing, and inspection of such equipment, and drills and exercises necessary to assure proper functioning and use of such equipment * * *. The Coast Guard determined that the use of independent laboratories for witnessing or performing certain tests and conceptions was “necessary” to carry out its responsibilities under this statutory section. In the notice of proposed rulemaking proposing 46 CFR part 159, the Coast Guard explained that “the Coast Guard’s marine inspection responsibilities increased while the number of personnel available to perform these inspections has not increased at a comparable rate.” 43 FR 49440 (October 23, 1978). The Coast Guard promulgated part 159 to “free some of the Coast Guard’s limited field personnel for other duties with no change in the quality of the approved equipment or material.” Id.; see also 44 FR 73038 (December 17, 1979) (Final Rule document promulgating part 159).

² Section 3306 directs “the Secretary shall prescribe necessary regulations to ensure proper execution of, and to carry out, this part [addressing inspection and regulation of vessels] in the most effective manner for (1) the design, construction, alteration, repair, and operation of those vessels [subject to inspection] * * *; (2) lifesaving equipment and its use; (3) firefighting equipment, its use, and precautionary measures to guard against fire; (4) inspections and tests related to paragraphs (1), (2), and (3) of this subsection; and (5) the use of vessel stores and other supplies of a dangerous nature * * *.”

procedures only to require more stringent standards and procedures with Coast Guard approval. 46 CFR 159.007–3. Additionally, all accepted independent laboratories must be impartial and disinterested in the outcome of inspections and tests. See 46 CFR 159.010–3(a)(3)–(5) (requiring an independent laboratory not be owned or controlled by a manufacturer, vendor, or supplier of materials for the equipment or material to be inspected; not be dependent on acceptance as an independent laboratory to remain in business, and not advertise or promote equipment or materials that the independent laboratory inspects or tests.).

The Coast Guard reviews independent laboratory test and inspection reports when determining the approvability of equipment and materials. The Coast Guard currently allows accepted independent laboratories to witness tests of almost all types of shipboard equipment, including certain lifesaving equipment. See, e.g., 46 CFR 160.010–9(a) (approval and production tests in subpart 160.010, addressing buoyant apparatuses, must be conducted by an independent laboratory); 46 CFR 160.151–13(a) (manufacturers must arrange for an independent laboratory to inspect a prototype liferaft during fabrication); and 46 CFR 160.151–31(a) (production inspections and tests of inflatable liferafts must be carried out in accordance with the procedures for independent laboratory inspection).

Current regulations in 46 CFR part 160, however, require Coast Guard inspectors to be involved in all phases of the approval process of winches, davits, release mechanisms, lifeboats, and rescue boats. See 46 CFR part 160, subparts 160.015 (winches), 160.032 (davits), 160.033 (release mechanisms), 160.035 (lifeboats), and 160.056 (rescue boats).

Requiring Coast Guard inspectors to directly perform all phases of the approval process, however, can cause scheduling delays and increased expenses for manufacturers of lifesaving equipment. For example, Coast Guard inspectors are not always able to meet manufacturers’ schedules due to competing inspection demands and resource constraints. This can impede productivity and affect the availability of approved equipment for U.S. flag vessels. Third-party certification bodies may qualify as accepted independent laboratories and are often available locally with greater convenience to manufacturers.

Additionally, many manufacturers produce lifesaving equipment for multiple flag nations’ vessels, and must

have their equipment approved by each nation. Manufacturers often use third-party certification bodies for testing and inspection to satisfy certification requirements from other nations. Unless these third parties are qualified to witness tests and perform inspections on behalf of more than one nation, manufacturers must have their equipment inspected and tested by more than one national representative, which carries potential complications and delays.

The Coast Guard has found, through past experiences with U.S. flag vessel inspections and shipboard equipment approvals, that permitting independent laboratories to do work under appropriate Coast Guard oversight ultimately promotes safety, flexibility, and autonomy by permitting experts from industry to engage more directly in the inspection processes while preserving the Coast Guard’s safety and stewardship role in the maritime community.

In this rulemaking, the Coast Guard proposes to extend the use of independent laboratories, under the oversight of Coast Guard inspectors, in the approval process for additional lifesaving equipment. The Coast Guard proposes to require manufacturers to use an independent laboratory for prototype fabrication and production oversight, and provide the option in certain cases for manufacturers to use an independent laboratory, again overseen by the Coast Guard, for pre-approval review and prototype testing oversight.

C. Other Revisions

In this rulemaking, the Coast Guard also proposes to revise the structure of certain subparts affected by this rulemaking, and make additional, confirming appliance-specific changes to these subparts not related to harmonization with international standards or use of independent laboratories.

IV. Discussion of Proposed Rule

The Coast Guard’s rules addressing lifesaving equipment are found in 46 CFR part 160. Each subpart addresses a specific type of lifesaving equipment. The Coast Guard proposes to amend these subparts to:

- Harmonize its regulations with IMO standards for launching appliances (winches and davits), release mechanisms, survival craft (lifeboats, inflatable liferafts, and inflatable buoyant apparatuses), and rescue boats, and add new harmonized rules addressing automatic disengaging devices;

- Incorporate the use of independent laboratories, under Coast Guard oversight, for Coast Guard approval procedures for launching appliances, lifeboats, rescue boats, and release mechanisms, and add such use of independent laboratories to proposed new rules addressing automatic disengaging devices; and
- Revise the structure of certain subparts affected by this rulemaking, and make additional appliance-specific changes to these subparts not related to harmonization with international standards or use of independent laboratories. This revision would include updating, adding, or removing certain standards incorporated by reference and creating a new subpart in 46 CFR part 164 addressing resins used in the construction of lifeboats and rescue boats. These revisions are discussed in more detail in sections IV.C. and D. below.

A. Harmonization With International Standards

To harmonize Coast Guard requirements for lifesaving equipment affected by this rulemaking with international standards that implement SOLAS Chapter III, the Coast Guard proposes to incorporate those international standards into the proposed rules and provide implementing interpretations of those standards in the proposed rules, as appropriate.

The Coast Guard proposes to incorporate by reference, into the affected subparts, the following international standards—

- International Life-saving Appliance Code (IMO Resolution MSC.48(66), as amended by IMO Resolutions MSC.207(81), MSC.218(82) and MSC.272(85));
- Revised recommendation on testing of life-saving appliances (IMO Resolution MSC.81(70), as amended by Resolution MSC.226(82) and Resolution MSC.274(85));

• MSC Circular 980, Standardized life-saving appliance evaluation and test report forms;

- MSC Circular 1006, Guidelines On Fire Test Procedures For Acceptance Of Fire-Retardant Materials For The Construction Of Lifeboats;
- MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems;
- IMO Resolution A.658(16) Use and Fitting of Retro-reflective Materials on Life-saving Appliances; and
- IMO Resolution A.760(18) Symbols Related to Life-Saving Appliances and Arrangements.

Additionally, the Coast Guard proposes to include interpretations of certain portions of these IMO documents for each type of equipment, as appropriate, in the affected subparts. These proposed interpretations, the equipment affected, and the location of the interpretations in the proposed rules are discussed below in Table 1: IMO Standards and Coast Guard Proposed Interpretations. The Coast Guard seeks comment on these interpretations.

TABLE 1—IMO STANDARDS AND COAST GUARD PROPOSED INTERPRETATIONS

International standard	USCG proposed interpretation	Equipment affected in proposed rule
LSA Code Chapter I/1.2, General requirements for all lifesaving appliances.	USCG would require manufacturers to follow the guidance of ASTM F 1166 for standard human engineering practices in the design.	<ul style="list-style-type: none"> • Release mechanisms: § 160.133–7(b)(2); • Lifeboats: § 160.135–7(b)(1)(ii); • Rescue boats: § 160.156–7(b)(1)(ii); • Automatic liferaft disengaging devices: § 160.170–7(b)(2).
LSA Code Chapter I/1.2, General requirements for all lifesaving appliances.	USCG would require lifesaving equipment, with the exception of fully enclosed lifeboats, be designed for use by persons wearing immersion suits.	<ul style="list-style-type: none"> • Release mechanisms: § 160.133–7(b)(1); • Lifeboats: § 160.135–7(b)(1)(i); • Rescue boats: § 160.156–7(b)(1)(i); • Automatic liferaft disengaging devices: § 160.170–7(b)(1).
LSA Code Chapter I/1.2.2.1, Addressing materials and workmanship for all life-saving appliances.	USCG would require: <ol style="list-style-type: none"> 1. Manufacturers to use steel and other materials that meet specific requirements. 2. Joined materials to be compatible and meet requirements for their mechanical connections. 3. Welder certifications for all welders 4. Hydraulic systems used in lifesaving systems to conform to 46 CFR 58.30. 	<ul style="list-style-type: none"> • Winches: § 160.115–7(b); • Davits: § 160.132–7(b); • Release mechanisms: § 160.133–7(b); • Lifeboats: § 160.135–7(b); • Rescue boats: § 160.156–7(b); • Automatic liferaft disengaging devices: § 160.170–7(b).
LSA Code Chapter I/1.2.2.6, Color of life-saving appliances [this also affects LSA Code Chapter IV/4.5 and 4.6 for lifeboats].	USCG would require the exterior color to be only vivid reddish-orange with certain exceptions provided.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(24); • Rescue boats: § 160.156–7(b)(26).
LSA Code Chapter I/1.2.2.7, Retroreflective material.	USCG would require retroreflective material be USCG approved under 46 CFR 164.018.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(27); • Rescue boats: § 160.156–7(b)(28).
LSA Code Chapter I/1.2.2.9, Marking of approved equipment.	USCG would require equipment be marked as approved.	<ul style="list-style-type: none"> • Winches: § 160.115–17; • Davits: § 160.132–17; • Release mechanisms: § 160.133–17; • Lifeboats: § 160.135–17; • Rescue boats: § 160.156–17; • Automatic liferaft disengaging devices: § 160.170–17.
LSA Code Chapter IV/ 4.1.5.1.5.	USCG would specify sea anchor attachment point	<ul style="list-style-type: none"> • Liferrafts: § 160.151–21(e).
LSA Code Chapter IV/ 4.1.3.3 and 4.1.3.4.	USCG would require both interior and exterior canopy lamps to be approved under approval series 161.101. ³	<ul style="list-style-type: none"> • Liferrafts: § 160.151–15(n).

TABLE 1—IMO STANDARDS AND COAST GUARD PROPOSED INTERPRETATIONS—Continued

International standard	USCG proposed interpretation	Equipment affected in proposed rule
LSA Code Chapter IV/4.2, Addressing inflatable life-rafts.	USCG would adopt the LSA Code recommendation that inflation systems meet the requirements of ISO 15738.	<ul style="list-style-type: none"> • Liferrafts and inflatable buoyant apparatus: § 160.151–15(l).
LSA Code Chapter IV/4.4.1, Construction of lifeboats.	USCG would require boats be constructed of steel, aluminum, or fiber reinforced plastic (FRP), or materials accepted by the Commandant as equivalent or superior.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(3); • Rescue boats: § 160.156–7(b)(3); • Resins: § 164.017.
LSA Code Chapter IV/4.4.4, Lifeboat buoyancy.	USCG would require buoyancy material meet acceptance criteria set by Commandant.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(5); • Rescue boats: § 160.156–7(b)(3)(5).
LSA Code Chapter IV/4.4.6, Lifeboat propulsion.	USCG would require lifeboat and rescue boat engines and associated components meet acceptance criteria set by Commandant. USCG would require engines also be U.S. EPA certified to the appropriate emissions tier.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(6)–(10); • Rescue boats: § 160.156–7(b)(7)–(11).
LSA Code Chapter IV/4.4.7, Lifeboat fittings.	USCG would require certain fittings and components on lifeboats and rescue boats required by the LSA Code to meet specific criteria.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(11)–(20); • Rescue boats: § 160.156–7(b)(12)–(23).
LSA Code Chapter IV/4.4.7.6, Addressing release mechanisms for lifeboats to be launched by a fall or falls, except free-fall lifeboats.	USCG would specify additional requirements for the operation and performance of release mechanisms including a requirement for a corrosion resistant and weatherproof instruction placard.	<ul style="list-style-type: none"> • Release mechanisms: § 160.133–7(b).
LSA Code Chapter IV/4.4.7.10 and 4.4.7.11, Manually controlled lamp and exterior light.	USCG would require both interior and exterior lamps or lights to be approved by the Commandant under approval series 161.101.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(19); (20); • rescue boats: § 160.156–7(b)(20); (21).
LSA Code Chapter IV/4.4.7.12, Adequate view from the control and steering position.	USCG would require performance criteria for visibility from the operator's station.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(2); • Rescue boats: § 160.156–7(b)(2).
LSA Code Chapter IV/4.4.8, Lifeboat equipment.	USCG would require lifeboat and rescue boat equipment required by the LSA Code meet the requirements of 46 CFR 199.175.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(21); • Rescue boats: § 160.156–7(b)(25).
LSA Code Chapter IV/4.8, Lifeboats with a self-contained air support system.	USCG would require the air bottles used in self-contained air support systems meet the requirements of 46 CFR 147.60.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–7(b)(25).
LSA Code Chapter IV/4.7.6, Addressing release systems for free-fall lifeboat.	USCG would require specific operational and launching requirements, including hydraulic systems, for free-fall boats.	<ul style="list-style-type: none"> • Free-fall lifeboats: § 160.133–7(b)(12)–(13).
LSA Code chapter VI/6.1.1.3, Gravity powered lowering.	USCG would require a clutch to disengage winch power during lowering.	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(6)(ii).
LSA Code Chapter VI/6.1.1.4, Accessibility of parts requiring maintenance.	USCG would require moving parts to have suitable guards.	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(3); • Davits: § 160.132–7(b)(3).
LSA Code Chapter VI/6.1.1.9, Winch motors.	USCG would require winch motors to meet applicable requirements of 46 CFR 58.30 (if hydraulic), or 46 CFR 111 (if electric).	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(6).
LSA Code Chapter VI/6.1.1.10, Embarkation time standards.	USCG would require winches used to launch davit-launched inflatable liferafts to have a quick return mechanism.	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(7).
LSA Code Chapter VI/6.1.2.2, Arrangement of launching mechanism controls.	USCG would specify arrangement of portable power outlet and emergency disconnect switch.	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(6)(iv)–(v).
LSA Code Chapter VI/6.1.2.4, Arrangement of winch drums.	USCG would require drums be arranged to ensure even winding of falls onto and off multiple-drum winches.	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(5).
LSA Code Chapter VI/6.1.2.6, Hand gears.	USCG would require power be disconnected for engaging hand crank.	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(6)(iii).
LSA Code Chapter VI/6.1.2.7, Safety devices for powered recovery.	USCG would specify requirements for limit switches	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(6)(vi).
LSA Code Chapter VI/6.1.2.12, Manual brakes.	USCG would require winch brake be positively controlled.	<ul style="list-style-type: none"> • Winches: § 160.115–7(b)(6)(i).
LSA Code Chapter VI/6.1.5, Liferaft launching appliances.	USCG would specify design and performance requirements.	<ul style="list-style-type: none"> • Liferaft automatic release hooks: § 160.170–7(b).

TABLE 1—IMO STANDARDS AND COAST GUARD PROPOSED INTERPRETATIONS—Continued

International standard	USCG proposed interpretation	Equipment affected in proposed rule
Resolution MSC.81(70) part 1.	USCG would require a visual inspection demonstrating conformance with approved plans.	<ul style="list-style-type: none"> • Winches: § 160.115–13(d); • Davits: § 160.132–13(d); • Release mechanisms: § 160.133–13(d); • Lifeboats: § 160.135–13(d); • Rescue boats: § 160.156–13(d); • Automatic liferaft disengaging devices: § 160.170–13(d).
Resolution MSC.81(70) part 1/6.9, On-load/off-load release mechanism tests.	USCG would require additional prototype test criteria for release mechanisms.	<ul style="list-style-type: none"> • Release mechanisms: § 160.133–13(d).
Resolution MSC.81(70) part 1/6 and 7, Lifeboat and rescue boat tests.	USCG would allow release mechanism and engine tests to be performed independent of the boat.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–13(d); and • Rescue boats: § 160.156–13(d).
MSC.81(70) part 1/6 and 7, Lifeboat and rescue boat tests.	USCG would require additional tests with supplementary requirements.	<ul style="list-style-type: none"> • Lifeboats: § 160.135–13(d); and • Rescue boats: § 160.156–13(d).
Resolution MSC.81(70) part 1/8.2, Davit-launched liferaft automatic release hook tests.	USCG would require additional prototype test criteria for release mechanisms.	<ul style="list-style-type: none"> • Liferaft automatic release hooks: § 160.170–13(d).
MSC.81(70) part 2/1.2, Addressing quality control procedures and production test record retention.	USCG would require specific provisions for the implementation of the quality control program required by the LSA Code.	<ul style="list-style-type: none"> • Winches: § 160.115–15(b); • Davits: § 160.132–15(b); • Release mechanisms: § 160.133–15(b); • Lifeboats: § 160.135–15(b); • Rescue boats: § 160.156–15(b); • Automatic liferaft disengaging devices: § 160.170–15(b).

³ The definition for approval series can be found in 46 CFR 199.30.

Additional proposed changes to regulations addressing the design, construction, and performance of lifesaving equipment, not discussed above in Table 1: IMO Standards and Coast Guard Proposed Interpretations, are discussed for each lifesaving equipment type in sections IV.C. *Affected Subparts: Revised and Proposed* and IV.D. *Structure of Part 160 Proposed Subparts*.

B. Independent Laboratories

To incorporate the use of independent laboratories into the approval process for lifesaving equipment, the Coast Guard proposes to—

- Provide the option, on a case-by-case basis and at the discretion and under the oversight of the Commandant (CG–5214) (the Lifesaving and Fire Safety Division), for manufacturers to use an independent laboratory for pre-approval review;
- Require manufacturers to use an independent laboratory for prototype fabrication oversight;
- Provide the option, on a case-by-case basis and at the discretion and under the oversight of the Commandant (CG–5214), for manufacturers to use an independent laboratory for prototype testing oversight; and
- Require manufacturers to use a Coast Guard accepted independent laboratory, rather than a Coast Guard

inspector, for production oversight and quality control.

The Coast Guard proposes to define the term “independent laboratory” in each affected subpart by referring to the definition of the term in 46 CFR 159.010–3, which includes commercial testing laboratories, as well as “classification societies and agencies of governments that are involved in the inspection and testing of marine safety equipment that meet the requirements of § 159.010–3.” As discussed above, 46 CFR part 159 contains the Coast Guard’s established standards and procedures for accepting and recognizing third parties as independent laboratories. The Coast Guard proposes to use this term for consistency with subpart 159 as well as other subparts contained in 46 CFR parts 159 through 164 (subchapter Q) and to reinforce that the same acceptance standards of 46 CFR 159.010–3 would apply to independent laboratories under the proposed new subparts.

The Coast Guard proposes to rely on these existing regulations and requirements in 46 CFR part 159 to accept and approve independent laboratories that would be involved in the lifesaving equipment process as proposed in this rulemaking.

As discussed above in III. *Background*, the Coast Guard currently has an approval process for lifesaving

equipment. Although the Coast Guard typically performs each step of this approval process, independent laboratories have been used in the approval process of buoyant apparatuses and liferafts. See 46 U.S.C. 3306(a); 46 CFR 160.010–9, 160.151–13, and 160.151–31. The Coast Guard has used independent laboratories in the approval process since 1982 for buoyant apparatuses (see 47 FR 41372 (September 20, 1982) (adding in 46 CFR part 160, subpart 160.010 with the requirements to that approval and production tests must be conducted by an independent laboratory)) and since 1997 for liferafts (see 62 FR 25525 (May 9, 1997) (adding 46 CFR part 160, subpart 160.151 with the requirements to that independent laboratory inspect fabrication of the liferaft and carry out production inspections and tests)).

The proposed rules would expand the use of independent laboratories into the approval process for winches, davits, release mechanisms, lifeboats, rescue boats and fast rescue boats, and automatic disengaging devices. The result of the proposed rules would be to provide consistent use of independent laboratories in the Coast Guard approval process for all lifesaving equipment required under the various vessel and facility regulations in titles 33 and 46 of the CFR.

Under the proposed rules, the Coast Guard would be notified of tests and inspections conducted by independent laboratories and would conduct oversight of the procedures, actions, and decisions of the independent laboratories. During the process of acceptance of an independent laboratory, the independent laboratory agrees to provide Coast Guard access to the place where test inspections are performed to verify information submitted and witness tests and inspections. 46 CFR 159.010–5(a)(7). Additionally, the proposed rules include additional Coast Guard oversight of independent laboratories by stating the manufacturer may not proceed with the next phase of the approval process until it receives notification that the current phase, including those phases performed by independent laboratories, is satisfactory to the Coast Guard. The Coast Guard would remain the sole issuer of certificates of approval for Coast Guard-approved lifesaving equipment. *See* 46 CFR part 2, subpart 2.75.

The Coast Guard proposes to require the use of independent laboratories to oversee prototype fabrication, production of approved equipment, and quality control because these phases do not require any decisions regarding the approvability of lifesaving equipment, and only require ensuring the equipment generally conforms to approved designs and required performance standards. Approvability of lifesaving equipment is evaluated during pre-approval review and prototype testing. If the Coast Guard reviews design plans and confirms that a prototype was constructed to those plans and performs as required, then the Coast Guard has been involved in the most critical aspects of lifesaving equipment manufacturing. New design or performance issues are most likely to appear during the process of preapproval plan review and prototype testing, not during prototype fabrication, production of approved equipment, and quality control.

The Coast Guard proposes to allow the use of independent laboratories during preapproval plan review and prototype testing, but only on a case-by-case basis and at the discretion and under the oversight of the Commandant (CG–5412). Because preapproval plan review and prototype testing phases involve decisions about the acceptability and approvability of lifesaving equipment design and performance, the Coast Guard intends to permit the use of independent laboratories in these phases only for conventional designs that do not

substantially differ from designs already approved by the Coast Guard. The Coast Guard expects that this proposal would free up Coast Guard headquarters staff for the evaluation of novel advances and innovations in lifesaving equipment. Additionally, the Coast Guard aims to relieve manufacturers of the burden of having the same design reviewed, or the same prototype tested, by multiple nations to ensure it complies with the same international standards. If an independent laboratory is accepted as such by several nations, then manufacturers could have their conventional designs reviewed, and prototypes of those conventional designs tested, by one independent laboratory for approval in all of those nations.

1. Preapproval Plan Review: Winches, Davits, Release Mechanisms, Lifeboats, Rescue Boats and Fast Rescue Boats, and Automatic Disengaging Devices

Proposed §§ 160.115–9(c), 160.132–9(c), 160.133–9(c), 160.135–9(c), 160.156–9(c), 160.170–9(c) would provide for the use of an independent laboratory for preapproval plan review at the request of the manufacturer and at the discretion of the Commandant (CG–5214). An independent laboratory would conduct preapproval plan review in accordance with the procedures agreed upon during the course of Coast Guard acceptance of the laboratory under 46 CFR part 159, subpart 159.010. The scope of the independent laboratory's approval authority and the applicable plan review procedures would be determined during the independent laboratory's acceptance process under 46 CFR part 159, subpart 159.010. As discussed above, the Coast Guard proposes that the Commandant (CG–5214) would exercise its discretion to delegate preapproval plan review to an independent laboratory primarily for routine review of conventional, non-novel designs that meet industry standards to free up Coast Guard headquarters staff for the evaluation of novel advances and innovations in lifesaving equipment. The Coast Guard does not anticipate delegating this performance in any instances that require independent laboratories to use their own discretion as to what would be acceptable to the Coast Guard.

This rulemaking would not affect the Coast Guard's control over the issuance of Coast Guard certificates of approval. *See* 46 CFR part 2, subpart 2.75. Additionally, under this proposal, the Coast Guard would conduct oversight of the plan review procedures used by the independent laboratories and handle any appeals under 46 CFR part 159.

2. Witnessing Prototype Fabrication: Lifeboats, and Rescue Boats and Fast Rescue Boats

The Coast Guard proposes to add the use of an independent laboratory for witnessing prototype fabrication in proposed §§ 160.135–11 and 160.156–11. Because fabrication of lifeboats, rescue boats, and fast rescue boats is more complex as compared to fabrication of winches, davits, release mechanisms, and automatic disengaging devices, only the proposed rules for the former types of lifesaving equipment would require oversight during prototype fabrication.

Proposed paragraph (b) of these sections would require that an independent laboratory oversee specified fabrication, inspections, and tests, unless directed otherwise by the Commandant (CG–5214). As discussed above, the Coast Guard intends oversight during prototype fabrication to ensure that a lifesaving equipment prototype is constructed in accordance with the plans approved by the Coast Guard during preapproval review. During this phase, the independent laboratory would ensure that the manufacturer is following Coast Guard direction. The Coast Guard would retain the right to oversee this phase of the approval process. *See* proposed §§ 160.135–11(b) and 160.156–11(b).

Proposed paragraphs (c) of these sections would require steps for the manufacturer to coordinate with the independent laboratory to ensure that fabrication of the product complies with the approved plans.

3. Prototype Testing: Winches, Davits, Release Mechanisms, Lifeboats, Rescue Boats and Fast Rescue Boats, and Automatic Disengaging Devices

The Coast Guard proposes to include the requirements for the prototype testing phase as detailed in proposed §§ 160.115–13, 160.132–13, 160.133–13, 160.135–15, 160.156–13, and 160.170–13. In these sections, proposed paragraph (b) would require that the Coast Guard conduct the inspections and tests required for prototype testing. Proposed paragraph (f), however, would permit an independent laboratory to perform the inspections and tests at the request of the manufacturer and at the discretion of the Commandant (CG–5214), similar to the proposed procedures for preapproval plan review. An independent laboratory would have to conduct prototype testing oversight in accordance with the procedures agreed upon during Coast Guard acceptance of the laboratory under 46 CFR 159.010–5. As with the preapproval plan review,

the Coast Guard proposes that the Commandant (CG-5214) would exercise its discretion to delegate prototype testing oversight to an independent laboratory. This would primarily be for testing conventional designs that do not require direct oversight by the Coast Guard because they do not contain any novel features or substantially depart from similar designs previously approved by the Coast Guard. Under this proposal, the Coast Guard would conduct oversight of procedures used by the independent laboratories for testing and handle any appeals under 46 CFR part 159.

4. Production and Quality Control: Winches, Davits, Release Mechanisms, Lifeboats, Rescue Boats and Fast Rescue Boats, and Automatic Disengaging Devices

Proposed §§ 160.115–15, 160.132–15, 160.133–15, 160.135–15, 160.156–15, and 160.170–15 would require that an independent laboratory oversee production fabrication, inspections, and tests, unless directed otherwise by the Commandant (CG-5214). Independent laboratory oversight during production and quality control would ensure that all production of approved lifesaving equipment conforms with the plans approved and the prototype tested by the Coast Guard. During this phase, as with prototype fabrication, the independent laboratory would ensure that the manufacturer is following Coast Guard direction.

Proposed paragraph (a) of these sections would require that an independent laboratory conduct all inspections, tests, and oversight in accordance with the procedures for independent laboratory inspection in 46 CFR part 159, subpart 159.007, unless directed otherwise by the Commandant (CG-5214). Under proposed paragraph (a) of these sections, the Coast Guard would retain the right to oversee this phase of equipment approval, as well as prescribe additional tests and inspections necessary to maintain quality control and monitor compliance.

Proposed §§ 160.115–15, 160.132–15, 160.133–15, 160.135–15, 160.156–15, and 160.170–15 would also outline the proposed roles and responsibilities for independent laboratories and manufacturers for the production and quality control of lifesaving equipment. See proposed paragraphs (b) and (d) of these sections. The Coast Guard would continue to conduct oversight of production testing and manufacturer quality control through its monitoring of independent laboratories under 46 CFR part 159.

Proposed paragraph (c) of these sections explains the proposed recordkeeping responsibilities for manufacturers and independent laboratories. Proposed paragraph (e) of these sections details proposed procedures for how and when to witness tests.

C. Affected Subparts: Revised and Proposed

Part 160 in 46 CFR addresses lifesaving equipment generally and is divided into subparts (e.g. 46 CFR part 160, subpart 160.[subpart number]) that each address a specific type of lifesaving equipment. In the current structure of 46 CFR part 160, the Coast Guard has traditionally numbered its subparts according to whether the lifesaving equipment addressed by the subpart is approved for use on vessels on coastwise routes and other non-international voyages, or for use on vessels on international voyages and therefore subject to SOLAS. Subparts with “.0” (e.g. 46 CFR part 160, subpart 160.0[remainder of subpart number]) generally apply to equipment approved for use on vessels on coastwise routes and other non-international voyages, and subparts with “.1” (e.g. 46 CFR part 160, subpart 160.1[remainder of subpart number]) apply to lifesaving equipment approved as meeting the SOLAS requirements for use on vessels on international voyages.

In this rulemaking, the Coast Guard proposes to revise subparts, remove subparts with “.0” and replace them with new subparts with “.1”, and add other new subparts to 46 CFR parts 160 and 164. The Coast Guard also proposes to add a new subpart to parts 160 and 164 to specifically state that the existing and proposed new and revised regulations in these parts preempt State and local regulation in the same field. For more discussion on preemption and this rulemaking, see section VI. E. *Federalism*, below.

The Coast Guard proposes to revise, remove, replace, and add subparts in 46 CFR parts 160 and 164 as follows:

- Revise 46 CFR part 160, subparts 160.010 (buoyant apparatus), 160.051 (inflatable liferafts for domestic service), and 160.151 (inflatable liferafts—SOLAS).
- Remove 46 CFR part 160, subparts 160.015 (winches), 160.032 (davits), 160.033 (release mechanisms), and 160.035 (lifeboats), and replace them with new subparts 160.115, 160.132, 160.133, and 160.135, respectively.
- Create new 46 CFR part 160, subparts 160.156 (rescue boats and fast rescue boats) and 160.170 (liferaft automatic release mechanisms).

- Create new 46 CFR part 160, subpart 160.900 (Preemption).
- Create new 46 CFR part 164, subpart 164.017 (Fire retardant resins for lifeboats and rescue boats).
- Create new 46 CFR part 164, subpart 164.900 (Preemption).

For liferafts (subparts 160.051 and 160.151) and rescue boats (subparts 160.056 and 160.156), the Coast Guard would continue to maintain two sets of regulations for this equipment based on voyage: domestic and international approval standards. For lifeboats (subpart 160.135), launching appliances—davits and winches—(subparts 160.132 and 160.115), and release mechanisms (subparts 160.133 and 160.170), however, there will be no corresponding domestic approval standards. The Coast Guard considers the standards for this equipment, as described in this proposed rule, to be appropriate to all U.S. flag vessels regardless of voyage.

For buoyant apparatuses (subpart 160.010) there would be no corresponding international approval standard. Because buoyant apparatuses do not meet the carriage requirements for vessels on international routes, and are not addressed in SOLAS, there is no need for an international approval subpart addressing buoyant apparatuses.

If the proposed rule is made final, all equipment approved after the effective date of the final rule would be required to conform to the appropriate revised, replaced, or added subparts. After the effective date of the final rule, winches, davits, lifeboats, and lifeboat release mechanisms approved under the subparts proposed for removal (subparts 160.015, 160.032, 160.033, and 160.035) could continue to be used as replacements-in-kind as permitted under the applicable vessel inspection subchapters of the CFR, but could not be used for new installations.

Manufacturers of liferafts would have to demonstrate that designs previously approved under the current regulations comply with the revised regulations prior to the expiration of their current approvals. Liferafts in service previously approved under the current regulations would not have to be replaced, provided that they remain in serviceable condition. See proposed §§ 160.051–1 and 160.151–1. However, when they become non-serviceable, and thus must be replaced, they would have to be replaced with a liferaft that conforms to the revised subpart.

1. Revised 46 CFR Part 160, Subpart 160.010—Buoyant Apparatuses

Current subpart 160.010 contains regulations regarding design,

construction, and approval of buoyant apparatuses. The Coast Guard proposes to retain this subpart because buoyant apparatuses are used only on coastwise and other non-ocean or non-international routes. See 46 CFR 199.630(a) (table referencing buoyant apparatus for Coastwise; Great Lakes; Lakes, Bays, & Sounds routes). The Coast Guard proposes to update the references to international standards for inflatable liferafts that the Coast Guard has already applied to inflatable buoyant apparatuses and incorporated into the existing regulations. See proposed 46 CFR 160.010–1(c). These inflatable liferaft standards are suitable standards to apply to inflatable buoyant apparatuses because of the similarity between inflatable buoyant apparatuses and inflatable liferafts. Subpart 160.010 already incorporates IMO standards, but the incorporated standards are currently outdated due to the transfer of part C of SOLAS chapter III to the IMO LSA Code. Coast Guard interpretations of these standards as applied to inflatable buoyant apparatuses are discussed above in Table 1: IMO Standards and Coast Guard Proposed Interpretations.

2. Revised 46 CFR Part 160, Subparts 160.051 and 160.151—Inflatable Liferafts

Current subparts 160.051 and 160.151 contain regulations regarding design, construction, and approval of inflatable liferafts for domestic service, and inflatable liferafts that are SOLAS compliant for international service, respectively. These subparts already incorporate IMO standards, but as discussed above, the incorporated standards are currently outdated. The Coast Guard proposes to retain these subparts and update the IMO standards incorporated. Those IMO standards and Coast Guard interpretations of those standards are discussed above in Table 1: IMO Standards and Coast Guard Proposed Interpretations. The Coast Guard proposes changing the requirement for replacing survival equipment items in § 160.151–57(b)(5)(i) from “replaced if its expiration date has passed” at the time of servicing to “replaced at the time of servicing if there is less than 6 months remaining before the expiration date,” to harmonize with the recommendation found in IMO Resolution A.761(18) and prevailing international practice.

The Coast Guard also proposes to amend the requirement in 46 CFR 160.151–21(e) to specify where on the liferaft the sea anchor should be attached. Recently, the Coast Guard became aware that the positioning of sea anchors on some liferafts may pose a

safety issue. While the IMO standards and Coast Guard regulations address sea anchors, they do not specifically address their positioning; requiring only that the sea anchor will cause the liferaft to lie oriented to the wind in the most suitable manner (LSA Code 4.1.5.1.5). The Commercial Fishing Industry Vessel Safety Advisory Committee (CFIVSAC) brought to the Coast Guard’s attention that the lack of a more specific positioning requirement could potentially endanger the lives of personnel onboard a liferaft. The industry has observed that when the sea anchor is tied-off at the entry door, it can interfere with boarding the liferaft, and keeps the raft entry oriented towards the oncoming seas and wind, potentially jeopardizing the safety of the liferaft occupants.

In the course of investigating the concerns raised by the CFIVSAC, the Coast Guard has communicated with representatives from all current manufacturers of Coast Guard-approved liferafts. Those manufacturers provided individual feedback and opinions, which influenced the wording of the proposed rule. A majority of the individuals responding recommended that the sea anchor be attached to the raft in a position so as to orient the primary entrance away from the seas as far as practicable, while still allowing the sea anchor to be retrieved by a person inside the raft.

Therefore, proposed 46 CFR 160.151–21(e) would require that sea anchors be attached to the raft in a position so as to orient the primary entrance away from the seas as far as practicable, while still allowing the sea anchor to be retrieved by a person inside the raft.

If you are a manufacturer of sea anchors and/or liferafts and did not have the opportunity to provide feedback and opinions previously, the Coast Guard welcomes your comments now.

3. Proposed 46 CFR Part 160, Subparts 160.115 and 160.132—Launching Appliances—Winches and Davits

Proposed subparts 160.115 and 160.132 contain the proposed regulations regarding design, construction, and approval of launching appliances. Proposed subpart 160.115 addresses winches and proposed subpart 160.132 addresses davits, currently governed by subparts 160.015 and 160.032, respectively. Proposed subparts 160.115 and 160.132 retain many of the requirements in subparts 160.015 and 160.032, respectively, as discussed below in section *IV.D. Structure of Part 160 Proposed Subparts*.

Structure of Part 160 Proposed Subparts.

Although 46 CFR part 160, subparts 160.015 and 160.032 currently apply only to lifeboat winches and davits, the Coast Guard proposes to expand the scope of the new subparts to also cover launching appliances used for davit-launched rescue boats and liferafts. See proposed §§ 160.115–1 and 160.132–1. The Coast Guard has determined that the same basic LSA Code standards apply to liferaft and rescue boat launching appliances as well as lifeboat and rescue boat launching appliances. Therefore, the Coast Guard proposes to address all launching appliances used to launch a lifeboat, rescue boat, or davit-launched liferaft in proposed subparts 160.115 and 160.132.

The Coast Guard has, in the past, approved liferaft launching appliances under approval series⁴ 160.163 (SOLAS). Current regulations contained in 46 CFR part 199 (subchapter W) and other vessel inspection subchapters refer to approval series 160.163 for requirements for launching appliances for davit-launched liferafts; however, 46 CFR part 160 does not contain a subpart addressing liferaft launching appliances. Based on the expanded scope of the proposed subparts discussed above, the Coast Guard proposes to replace all references to “approval series 160.163” in 46 CFR with the proposed 46 CFR part 160, subparts 160.115 and 160.132, as appropriate for new approvals. Vessels may continue to utilize existing liferaft launching appliances approved under approval series 160.163 prior to the effective date of the rule. See proposed §§ 108.550, 117.150, 133.150, 180.150, and 199.150.

4. Proposed 46 CFR Part 160, Subpart 160.133—Release Mechanisms

Proposed subpart 160.133 contains the proposed regulations regarding design, construction, and approval of release mechanisms, which is currently governed by 46 CFR part 160, subpart 160.033 (Mechanical Disengaging Apparatus, Lifeboat, for Merchant Vessels). Proposed subpart 160.133 revises and replaces the regulations in subpart 160.033, as discussed below in section *IV.D. Structure of Part 160 Proposed Subparts*.

5. Proposed 46 CFR Part 160, Subpart 160.135—Lifeboats

Construction of Coast Guard-approved lifeboats is currently governed by 46 CFR part 160, subpart 160.035. Proposed new subpart 160.135 would completely replace subpart 160.035. Proposed subpart 160.135 would

⁴ The definition for approval series can be found in 46 CFR 199.30.

address davit launched, as well as free-fall lifeboats, which would change the scope from subpart 160.035. When subpart 160.035 was promulgated, free-fall lifeboats did not exist. Because the same basic IMO standards apply to both types of lifeboats, proposed subpart 160.135 addresses both.

6. Proposed 46 CFR Part 160, Subpart 160.156—Rescue Boats and Fast Boats

Construction of Coast Guard-approved rescue boats is currently governed by 46 CFR part 160, subpart 160.056, which addresses only non-SOLAS compliant, simple boats approved locally by the Officer in Charge, Marine Inspection (OCMI). Proposed subpart 160.156 would contain the proposed regulations regarding design, construction, and approval of rescue boats and fast rescue boats complying with SOLAS. When subpart 160.056 was promulgated, fast rescue boats did not exist. Proposed subpart 160.156, however, would not replace subpart 160.056. The Coast Guard proposes to retain subpart 160.056 as an acceptable alternative rescue boat for certain classes of vessels as permitted by titles 33 and 46 of the CFR.

7. Proposed 46 CFR Part 160, Subpart 160.170—Automatic Disengaging Devices

Currently 46 CFR part 160 does not contain a subpart addressing automatic disengaging devices that can be used to launch liferafts and single fall rescue boats. However, 46 CFR part 199 (subchapter W) makes reference to these devices via approval series 160.170. *See, e.g.*, 46 CFR 199.150(a)(2). The Coast Guard proposes a new subpart 160.170 to incorporate the requirements in the IMO LSA Code and Recommendation on Testing with Coast Guard interpretations of those requirements as discussed above in Table 1: IMO Standards and Coast Guard Proposed Interpretations.

8. Proposed 46 CFR Part 160, Subpart 164.017—Fire Retardant Resins for Lifeboats and Rescue Boats

Currently, the requirements for resins used in the construction of fiberglass-reinforced plastic lifeboats are contained in 46 CFR 160.035–8(b). There are no corresponding requirements in subpart 160.056. Resins, unlike lifesaving equipment, do not receive a certificate of approval from the Commandant (CG–5214), but must still be accepted by the Commandant (CG–5214) for use in the manufacture of Coast Guard-approved lifeboats and rescue boats.

Because of the relative comprehensiveness of the fire retardant resin standards, the Coast Guard proposes to separate the resin requirements from the design, construction, and performance standards and create a new subpart in part 164. Rather than include the resin requirements in proposed subparts 160.135 and 160.156, these proposed subparts would cross-reference 164.017.

Proposed subpart 164.017 would retain the main requirements of 46 CFR 160.035–8(b), including the requirement that manufacturers use independent laboratories to test and certify that their resin meets the proposed requirements and submit an application for acceptance of the resin to the Commandant (CG–5214). The Coast Guard proposes revising the structure of the resin requirements to conform to the structure of a CFR subpart, and would include a scope for the subpart as well as definitions.

The scope of proposed subpart 164.017 would state that the subpart contains performance requirements, acceptance tests, and production testing and inspection requirements for fire retardant resins used in the construction of lifeboats and rescue boats approved under proposed 46 CFR part 160, subparts 160.135 and 160.156. *See* proposed § 164.017–1. The definitions would include a definition of “acceptance” modeled after the definition in 46 CFR 164.019–3, and the definitions for “Commandant” and “independent laboratory” included in each of the proposed new subparts (160.115, 160.132, 160.133, 160.135, 160.156 and 160.170), discussed below under section *IV.D. Structure of Part 160 Proposed Subparts*.

The Coast Guard proposes to update and replace some of the resin standards currently incorporated by reference in 46 CFR 160.035–8(b). The standards proposed for incorporation by reference in proposed subpart 164 would appear in proposed § 164.017–5, and are discussed below in section *IV.D. Structure of Part 160 Proposed Subparts*. The Coast Guard proposes including the use of equivalent international standards as an alternative to national consensus standards. *See* proposed § 164.017–7.

The Coast Guard also proposes to include a new procedure for Coast Guard acceptance of material changes from any resin accepted under proposed subpart 164.017. *See* proposed § 164.017–15.

D. Structure of Part 160 Proposed Subparts

The structure of each of the proposed new subparts in part 160 (subparts 160.115, 160.132, 160.133, 160.135, 160.156 and 160.170) would be similar to aid in readability and familiarity with the proposed rules for the affected lifesaving equipment. Additionally, much of regulatory text addressing the approval process in the proposed new subparts would be substantially similar across the new subparts. The major difference in regulatory text in the new subparts would be the technical requirements for specific lifesaving equipment. The technical requirements affected by IMO standards are discussed in detail in Table 1: IMO Standards and Coast Guard Proposed Interpretations, and any additional equipment-specific proposed requirements are noted in each section below.

The general structure of the proposed new subparts would be as follows:

- § 160.[subpart number]–1 Scope.
 - § 160.[subpart number]–3 Definitions.
 - § 160.[subpart number]–5 Incorporation by reference.
 - § 160.[subpart number]–7 Design, construction, and performance of [name of lifesaving equipment addressed by the subpart].
 - § 160.[subpart number]–9 Preapproval review.
 - § 160.[subpart number]–11 Fabrication of prototype [name of lifesaving equipment addressed by the subpart] for approval.
 - § 160.[subpart number]–13 Approval inspections and tests for prototype [name of lifesaving equipment addressed by the subpart].
 - § 160.[subpart number]–15 Production inspections, tests, quality control, and conformance of [name of lifesaving equipment addressed by the subpart].
 - § 160.[subpart number]–17 Marking and labeling.
 - § 160.[subpart number]–19 Operating instructions and information for the ship’s training manual.
 - § 160.[subpart number]–21 Operation and maintenance instructions.
 - § 160.[subpart number]–23 Procedure for approval of design or material change.
1. Section 160.[subpart number]–1 Scope

This section would state that the subpart prescribes standards, tests, and procedures to seek Coast Guard approval of the specific type of lifesaving equipment addressed by the

proposed new subpart. Proposed differences in the scope between an existing subpart and a proposed subpart to replace that existing subpart are discussed above in section IV.C. *Affected Subparts Revised and Proposed.*

2. Section 160.[subpart number]-3 Definitions

This section would contain the definitions of terms for the proposed new subpart. As discussed above in section IV.B. *Independent Laboratories*, the definition of “independent laboratory” would appear in each subpart and would have the same meaning as the term defined in 46 CFR 159.010-3. The definitions of “Commandant” and “SOLAS” would appear in each subpart. The Coast Guard borrowed these definitions from 46 CFR 160.151-3 and updated them to reflect the Coast Guard’s address and recent SOLAS amendments. “Commandant” would mean the Commandant (CG-5214), which is the Lifesaving and Fire Safety Division that administers the Coast Guard approval process for lifesaving equipment. The Coast Guard also proposes adding to each new subpart a definition for “OCMI”, an

Officer in Charge, Marine Inspection, which is borrowed from 46 CFR 175.400.

This section of the proposed subparts would also contain any definitions specific to a subpart as follows.

Proposed §§ 160.133-3 and 160.170-3 (Release Mechanisms and Automatic Disengaging Devices): These sections would contain two additional definitions: “light load” and “full load” of lifeboats and rescue boats, which also are referred to as the “condition A” and “condition B” weights of the boats.

Proposed §§ 160.135-3 and 160.156-3 (Lifeboats and Rescue Boats and Fast Rescue Boats): These sections would contain the same “light load” and “full load” definitions proposed in § 160.133-3 and would also provide definitions for “fiberglass reinforced plastic (FRP)” and “positive stability.”

3. Section 160.[subpart number]-5 Incorporation by reference & Proposed § 164.017-5

Section 160.[subpart number]-5 would list the IMO standards that the Coast Guard proposes to incorporate to harmonize its regulations with international standards. Section 160.[subpart number]-5 would also list

other technical standards incorporated by reference that are specific to that particular subpart, and are used in Coast Guard interpretations of the IMO standards. Section 164.017-5 would list technical standards incorporated by reference in proposed new 46 CFR part 160, subpart 164.017. The technical standards in §§ 160.[subpart number]-5 and 164.017-5 include recommended guidelines from IMO that the Coast Guard proposes to incorporate by reference as required standards. IMO standards and other technical standards included in these sections are either new standards or updated from a previous version of a similar standard and are discussed below in Table 2: New and Updated Standards Incorporated by Reference. For more information about incorporation by reference, see section V. *Incorporation by Reference* below.

These sections would use the standards currently incorporated by reference in the subparts the Coast Guard proposes to remove that the Coast Guard has determined are still applicable, and would update other such standards. The Coast Guard would not retain other specifications that are no longer used.

TABLE 2—NEW AND UPDATED STANDARDS INCORPORATED BY REFERENCE

Organization	Title	Description	Equipment affected
American Society for Testing and Materials (ASTM).	A 36/A 36M-08 Standard Specification for Carbon Structural Steel.	Provides a specification for carbon steel shapes, plates, and bars of structural quality for use in bolted or welded construction of the load bearing steel components of lifesaving appliances in column 3.	Davits, release mechanisms, lifeboats, rescue boats, and automatic disengaging devices.
	A 216/A 216M-08 Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding for High-Temperature Service.	Provides a specification for carbon steel castings for assembly with other castings or wrought-steel parts by fusion welding.	Davits.
	B 127-05(2009) Standard Specification for Nickel-Copper Alloy (UNS N04400) Plate, Sheet, and Strip.	Provides a standard specification for nickel-copper alloys to be used in the construction of fuel tanks.	Lifeboats and rescue boats.
	B 209-07 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.	Provides a standard specification for aluminum and aluminum alloys to be used in the construction of lifeboats and rescue boats.	Lifeboats and rescue boats.
	D 543-06 Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents.	Provides a method for testing FRP to standard test chemical reagents; alternative method to ISO 175.	Lifeboat and rescue boat resins.
	D 570-98(2005) Standard Test Method for Water Absorption of Plastics.	Provides a method to perform a 24-hour water immersion test for FRP; alternative method to ISO 62.	Lifeboat and rescue boat resins.
	D 638-08 Standard Test Method for Tensile Properties of Plastics.	Provides a standard for determining the tensile strength of laminate samples taken from (or representative of) major components of the lifeboat; alternative method to ISO 527.	Lifeboat and rescue boat resins.

TABLE 2—NEW AND UPDATED STANDARDS INCORPORATED BY REFERENCE—Continued

Organization	Title	Description	Equipment affected
	A 653/A 653M—08 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.	Provides a specification for steel sheet, zinc-coated (galvanized) or zinc-iron alloy-coated (galvannealed) by the hot-dip process in coils and cut lengths. Steel requiring protective coatings must meet the requirements of A 653.	Release mechanisms, lifeboats, rescue boats, and automatic disengaging devices.
	D 695—(08) Standard Test Method for Compressive Properties of Rigid Plastics.	Provides a method for determining ultimate compressive strength of FRP; alternative method to ISO 604.	Lifeboat and rescue boat resins.
	D 790—07e1 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.	Provides a standard method for determination of the ultimate strength of laminate samples taken from (or representative of) major components of the lifeboat or rescue boat; alternative method to ISO 14125.	Lifeboat and rescue boat resins.
	D 792—08 Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.	Provides a method for evaluating the density of cured unfilled resins; an alternative method to ISO 1183-1.	Lifeboat and rescue boat resins.
	D 1045—08 Standard Test Methods for Sampling and Testing Plasticizers Used in Plastics.	Provides a method to determine specific gravity of uncatalyzed liquid resins; an alternative method to ISO 1675.	Lifeboat and rescue boat resins.
	D 1824—95(2002) Standard Test Method for Apparent Viscosity of Plastics and Organosols at Low Shear Rates.	Provides a method to determine viscosity of uncatalyzed liquid resins; an alternative method to ISO 255.	Lifeboat and rescue boat resins.
	D 2471—99 Standard Test Method for Gel Time and Peak Exothermic Temperature of Reacting Thermosetting Resins.	Provides a method for measuring the maximum temperature (peak exotherm) reached by a reacting thermosetting plastic composition and the time from initial mixing of the reactants of a thermosetting plastic composition to the time when solidification commences (gel time); ISO 2535 provides an alternative to the gel time determination method only.	Lifeboat and rescue boat resins.
	D 2583—07 Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.	Provides a test method for the determination of indentation hardness of both reinforced and nonreinforced rigid plastics using a Barcol Impressor, Model No. 934-1 and Model No. 935; an alternative method to ISO 2039 (series).	Lifeboat and rescue boat resins.
	D 2584—08 Standard Test Method of Ignition Loss of Cured Reinforced Resins.	Provides a test method for the determination of the ignition loss of cured reinforced resins which can be equated to the resin content within limitations defined in the standard; an alternative to ISO 1172.	Lifeboat and rescue boat resins.
	D 4029—09 Standard Specification for Finished Woven Glass Fabrics.	Provides a standard for finished, woven electrical grade fabric in the construction of FRP.	Lifeboats and rescue boats.
	F 1014—02(2007) Standard Specification for Flashlights on Vessels.	Specifies Type I; Type II; and Type III flashlights.	Inflatable liferafts.
	F 1166—07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities.	Provides a standard for ergonomic design criteria from a human-machine perspective to be applied to the design and construction of lifesaving appliances listed in column 3.	Inflatable liferafts, release mechanisms, lifeboats, rescue boats, and automatic disengaging devices.

TABLE 2—NEW AND UPDATED STANDARDS INCORPORATED BY REFERENCE—Continued

Organization	Title	Description	Equipment affected	
General Services Administration (GSA).	G 154–06 Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.	Provides a method for the accelerated weathering test of FRP.	Lifeboats and rescue boats.	
	Federal Standard 595C—Colors Used in Government Procurement.	Provides a standard for vivid reddish orange on the exteriors of the lifesaving appliances listed in column 3.	Lifeboats, rescue boats, buoyant apparatuses, and liferafts.	
International Maritime Organization (IMO).	International Life-Saving Appliance Code, (IMO Resolution MSC.48(66), as amended).	Provides the design, construction and performance standard for SOLAS required life-saving appliance.	Davits, winches, release mechanisms, lifeboats, rescue boats, automatic disengaging devices, and buoyant apparatuses.	
	IMO Resolution A.657(16) Instructions for Action in Survival Craft.	Provides standardized instructions for people in liferafts.	Liferafts.	
	IMO Resolution A.658(16) Use and Fitting of Retro-reflective Materials on Life-saving Appliances.	Provides a standard for retro-reflective material.	Lifeboats, rescue boats, liferafts and buoyant apparatuses.	
	IMO Resolution A.760(18) Symbols Related to Life-Saving Appliances and Arrangements.	Provides a standard catalogue of symbols to be used in life-saving appliance manuals and placards.	Davits, winches, release mechanisms, lifeboats, rescue boats, automatic disengaging devices, and buoyant apparatuses.	
	IMO Revised Recommendation on testing of life-saving appliances, IMO Resolution MSC.81(70) as amended.	Provides the testing requirements for all life-saving appliances required by SOLAS.	Davits, winches, release mechanisms, lifeboats, rescue boats, automatic disengaging devices, and buoyant apparatuses.	
	MSC Circ. 980, Standardized life-saving appliance evaluation and test report forms.	Provides a concise, standard format for documenting prototype testing.	Winches, davits, lifeboats, rescue boats, release mechanisms, and automatic disengaging devices.	
	MSC/Circ. 1006, Guidelines On Fire Test Procedures For Acceptance Of Fire-Retardant Materials For The Construction Of Lifeboats.	Provides an alternative to MIL–R–7575C and MIL–R–21607E(SH) for the fire-resistance tests of FRP used in lifeboat construction.	Lifeboat and rescue boat resins.	
	MSC.1 Circ. 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems.	Provides a standard format for manufacturers to present their Operations and Maintenance manuals.	Lifeboats, winches, davits, lifeboats, rescue boats, release mechanisms, and automatic disengaging devices.	
	International Organization for Standardization (ISO).	62:2008 Plastics—Determination of water absorption.	Provides an alternative test method to ASTM D 570.	Lifeboat and rescue boat resins.
		175:1999 Plastics—Methods of tests for the determination of the effects of immersion in liquid chemicals.	Provides an alternative test method to ASTM D 543.	Lifeboat and rescue boat resins.
14125:1998 Fibre-reinforced plastic composites—Determination of flexural properties.		Provides an alternative test method to ASTM D 790.	Lifeboat and rescue boat resins.	
527–1:1993 Plastics—Determination of tensile properties.		Provides an alternative test method to ASTM D 638.	Lifeboat and rescue boat resins.	
604:2002 Plastics—Determination of compressive properties.		Provides an alternative test method to ASTM D 695.	Lifeboat and rescue boat resins.	
1172:1996 Textile-glass-reinforced plastics—Prepregs, moulding compounds and laminates—Determination of the textile-glass and mineral-filler content—Calcination methods.		Provides an alternative test method to ASTM D 2584.	Lifeboat and rescue boat resins.	
1183–1:2004 Plastics—Methods for determining the density of non-cellular plastics—Part 1: Immersion method, liquid pycnometer method and titration method.		Provides an alternative test method to ASTM D 792.	Lifeboat and rescue boat resins.	
1675:1985 Plastics—Liquid resins—Determination of density by the pycnometer method.		Provides an alternative test method to ASTM D 1045.	Lifeboat and rescue boat resins.	
2039–1:2001 Determination of hardness—Part 1: Ball indentation method.		Provides an alternative test method to ASTM D 2583.	Lifeboat and rescue boat resins.	

TABLE 2—NEW AND UPDATED STANDARDS INCORPORATED BY REFERENCE—Continued

Organization	Title	Description	Equipment affected
	2039–2:1987 Determination of hardness—Part 2: Rockwell hardness.	Provides an alternative test method to ASTM D 2583.	Lifeboat and rescue boat resins.
	2114:2000 Plastics (polyester resins) and paints and varnishes (binders)—Determination of partial acid value and total acid value.	Provides an alternative test method to ASTM D 1045.	Lifeboat and rescue boat resins.
	2535:2001 Plastics—Unsaturated-polyester resins—Measurement of gel time at ambient temperature.	Provides an alternative test method of ASTM D 2471.	Lifeboat and rescue boat resins.
	2555:1989 Plastics—Resins in the liquid state or as emulsions or dispersions—Determination of apparent viscosity by the Brookfield test method.	Provides an alternative test method to ASTM D 1824.	Lifeboat and rescue boat resins.
	15372:2000, Ships and marine technology—Inflatable rescue boats—Coated fabrics for inflatable chambers.	Provides a standard for the textiles used in the buoyancy chambers of inflatable and rigid-hull inflatable rescue boats.	Rescue boats.
	15738:2002, Ships and marine technology—Gas Inflation systems for inflatable life-saving appliances.	Provides a standard for inflation systems.	Liferafts.
	17339:2002, Ships and marine technology—Sea anchors for survival craft and rescue boats.	Provides sea anchor construction standards.	Liferafts.
	18813:2006, Ships and marine technology—Survival equipment for survival craft and rescue boats.	Provides construction standards for various survival equipment items.	Liferafts.
Society of Automotive Engineers (SAE).	J1527–93, Marine Fuel Hoses	Provides a standard for USCG type A fuel hoses required on outboard engines.	Rescue boats.
U.S. Military Specification	A–A–55308, Cloth And Strip, Laminated Or Coated, Vinyl Nylon Or Polyester, High Strength, Flexible.	Provides a standard for the cloth used in foldable canopies on partially enclosed lifeboats.	Lifeboats.
	MIL–C–19663D: Cloth, Woven Roving, For Plastic Laminate, 4 AUG 1998.	Provides a standard requirement for “E” glass woven textiles for use in FRP.	Lifeboats and rescue boats.
	MIL–C–17415E—Cloth, Coated, and Webbing, Inflatable Boat and Miscellaneous Use.	Provides a standard for materials to be used for canopy, seam tape, inflatable floor, and other inflatable and structural components.	Liferafts.
	MIL–P–17549D(SH): Plastic Laminates, Fibrous Glass Reinforced, Marine, 31 AUG 1981.	Provides standard minimum mechanical properties of laminate samples taken from finished FRP components, e.g. hull & canopy.	Lifeboats and rescue boats.
	MIL–P–19644 C—Plastic Molding Material (Polystyrene Foam, Expanded Bead).	Provides plastic foam standards ...	Buoyant apparatuses.
	MIL–P–21929 B—Plastic Material, Cellular Polyurethane, Foam-In-Place, Rigid (2 and 4 Pounds per Cubic Foot).	Provides plastic foam standards ...	Buoyant apparatuses.
	MIL–P–40619 A—Plastic Material, Cellular, Polystyrene (For Buoyancy Applications).	Provides plastic foam standards ...	Buoyant apparatuses.
	MIL–R–7575 C—Resin, Polyester, Low Pressure Laminating, 29 June 1966.	Provides standard testing protocols and minimum mechanical properties of FRP test samples for the acceptance of polyester resins used in FRP laminates.	Lifeboat and rescue boat resins.
	MIL–R–21607E(SH), Resins, Polyester, Low Pressure Laminating, Fire-Retardant, 25 May 1990.	Provides a standard for flame resistance of resins used in FRP laminates.	Lifeboat and rescue boat resins.

TABLE 2—NEW AND UPDATED STANDARDS INCORPORATED BY REFERENCE—Continued

Organization	Title	Description	Equipment affected
Underwriters Laboratories (UL)	MIL-R-24719(SH), Resins, Vinyl Ester, Low Pressure Laminating, 4 May 1989.	Provides standard testing protocols and minimum mechanical properties of FRP test samples for the acceptance of vinyl ester resins used in FRP laminates.	Lifeboat and rescue boat resins.
	1102, Standard for Nonintegral Marine Fuel Tanks.	Provides a standard for permanent fuel tanks that are not part of the hull.	Rescue boats.
	1185, Standard for Portable Marine Fuel Tanks.	Provides a standard for portable fuel tanks typically used with outboard engines.	Rescue boats.

4. Section 160.[subpart number]–7 Design, construction, and performance of [name of lifesaving equipment addressed by the subpart]

Section 160.[subpart number]–7 would provide the detailed design, construction, and performance requirements for each equipment type addressed in the proposed new subparts. This section would contain the IMO requirements and other requirements for specific equipment types. The proposed new or revised requirements for each equipment type are discussed in detail in Table 1: IMO Standards and Coast Guard Proposed Interpretations, above. Section 160.[subpart number]–7 would also explicitly state that design, material, and construction equivalence determinations may be made by the Commandant (CG–5214) only. See proposed paragraph (c). This section would also contain equipment-specific technical requirements as follows:

Proposed §§ 160.115–7 and 160.132–7 (Launching Appliances—Winches and Davits): The Coast Guard interpretations of the LSA Code and Resolution MSC.81(70), as discussed above in Table 1: IMO Standards and Coast Guard Proposed Interpretations, are taken directly from the existing regulations for winches and davits contained in subparts 160.015 and 160.032, respectively. The Coast Guard would not retain existing requirements from subparts 160.015 and 160.032 that are adequately addressed by the LSA Code, requirements specific to installation and arrangement that are addressed in the various vessel and facility regulations in titles 33 and 46 of the CFR, and requirements applicable to mechanical davits, which are not permitted by the LSA Code and have become obsolete.

Proposed § 160.135–7 (Lifeboats): This section would contain a cross-reference to proposed new subpart 164.017 for the requirements for fire retardant resins. Additionally, because this section would incorporate the

lifeboat design and performance requirements of the LSA Code and Resolution MSC.81(70), and the Coast Guard interpretations of those documents, as discussed above in Table 1: IMO Standards and Coast Guard Proposed Interpretations, the Coast Guard would not retain requirements in subpart 160.035 for certain types of obsolete lifeboats as well as obsolete construction techniques. For example, the Coast Guard would not retain requirements for lifeboats that are propelled solely by oar or hand (*e.g.*, Fleming gear), open lifeboats, lifeboats with radio cabins, and steel assembly via riveting. Existing vessels with these types of lifeboats may still be able to replace in-kind provided they meet the criteria in titles 33 and 46 of the CFR.

The Coast Guard also proposes adding the installation of navigation lights in § 160.135–7, when applicable, on lifeboats. Chapter I, Regulation 8(b)(ii) of SOLAS 74, as amended, requires surveys of lifesaving appliances to ensure they are in compliance with the International Regulations for Preventing Collisions at Sea (COLREGS). COLREGS does not contain any exemptions to the navigation light requirements for motor-driven survival craft or rescue boats. Regulation 23 of COLREGS, however, does allow “a power-driven vessel of less than 7 meters in length whose maximum speed does not exceed 7 knots may in lieu of the lights prescribed in paragraph (a) of this Rule exhibit an all-round white light and shall, if practicable, also exhibit sidelights.” There are modern lifeboats, as well as rescue boats, that are 7 meters or longer and/or have maximum speeds of over 7 knots. The Coast Guard proposes to require the installation of navigation lights on lifeboats and rescue boats, consistent with the COLREGS requirements. While there is no specific mention of navigation lights in the LSA Code or Resolution MSC.81(70), the Coast Guard interprets SOLAS as requiring them.

Proposed § 160.156–7 (Rescue Boats and Fast Boats): This section would contain essentially identical technical requirements to those for lifeboats in § 160.135–7 with some requirements unique to rescue boats. For example, the Coast Guard would add requirements for coated cloth used in inflatable collars. However, consistent with the LSA Code, air in the inflated collar of a rigid-hull inflatable rescue boat would not be considered inherently buoyant material for the purposes of meeting the LSA Code’s requirement for additional buoyant material in chapter IV/4.4.4. The Coast Guard would add fuel system requirements unique to outboard gasoline engines, which are only allowed on rescue boats, see Table 2: New and Updated Standards Incorporated by Reference, above. Further, the requirement regarding navigation lights for lifeboats would also apply to rescue boats. Also unique to rescue boats would be the allowance to use automatic liferaft disengaging devices approved under proposed subpart 160.170 when the rescue boat is of a type suspended on a single fall. This is addressed in Table 1: IMO Standards and Coast Guard Proposed Interpretations; see also 46 CFR 199.160.

5. Section 160.[subpart number]–9 Preapproval review

This section would describe the procedures for requesting preapproval review of a design for the type of lifesaving equipment addressed by the proposed new subpart. Proposed paragraph (b) of this section would contain manufacturer requirements for submitting an application to the Commandant (CG–5214) for approval and clarify the items required in the application. For all equipment, an application for approval would include a master drawing list, detailed arrangement and assembly drawings, a full bill of materials, structural calculations, all required manuals, the proposed quality assurance plan, the

name of the independent laboratory that will conduct prototype and production oversight, and any additional details necessary to demonstrate compliance with the applicable subpart.

Proposed paragraph (d) would contain specifications for plan quality, and proposed paragraph (e) would require that any alternative materials, parts, or construction must be clearly indicated in plans. Proposed paragraph (f) of this section in each subpart states that Coast Guard may suspend review of an application if they do not comply with the requirements of this section.

Section 160.[subpart number]–9 would also contain the Coast Guard’s proposal that, in general, this review would be conducted by the Commandant (CG–5214), although the Coast Guard may delegate the preapproval review to an independent laboratory at the Coast Guard’s discretion. This proposal is discussed in more detail above in section *IV.B. Independent Laboratories*.

6. Section 160.[subpart number]–11 Fabrication of prototype [name of lifesaving equipment addressed by the subpart] for approval

This section would specify the procedures for the fabrication of prototype equipment for approval and list the manufacturer’s and independent laboratory’s responsibilities in that process. The responsibilities would include requirements that a manufacturer arranging for fabrication inspections and tests could do so only after receiving notice of meeting the requirements of preapproval review. It would also detail submission of the inspection report to the Commandant (CG–5214). Because fabrication of lifeboats and rescue boats and fast rescue boats is more complex as compared to fabrication of winches, davits, release mechanisms, and automatic disengaging devices, and encompasses certain features (such as fiberglass layup) that cannot be reliably inspected in a finished product, oversight is required at this phase to ensure compliance with the plans submitted for preapproval. Therefore, this proposed section would only appear in proposed new subparts 160.135 and 160.156. In proposed new subparts 160.115, 160.132, 160.133, and 160.170 this section would be reserved.

Section 160.[subpart number]–11 would also contain the Coast Guard’s proposal to delegate the performance of the oversight of the prototype construction to the independent laboratory, which must conduct its oversight in accordance with 46 CFR part 159, subpart 159.007. See proposed

paragraph (b). This proposal is discussed in more detail above in section *IV.B. Independent Laboratories*.

Proposed §§ 160.135–11 (Lifeboats) and 160.156–11 (Rescue boats): In these sections, the Coast Guard would require prototype lifeboats and rescue boats constructed with FRP to be made with unpigmented resins to allow the attending independent laboratory to have a means to visually inspect the construction of the major FRP components, and to be able to see any internal structural damage that occurs during testing. The Coast Guard proposes that the attending independent laboratory witness weighing of each major component constructed of FRP before assembly with other components prior to installation of buoyancy foam and then again with buoyancy foam in place. The Coast Guard also proposes the attending independent laboratory ensure any welding of structural components is accomplished by qualified welders, see also proposed §§ 160.135–7(b)(5) and 160.156–7(b)(4). Further, the Coast Guard proposes the attending independent laboratory inspect the propulsion, steering, and water spray and air support systems after their installation to ensure they are in compliance with the approved prototype plans.

7. Section 160.[subpart number]–13 Approval inspections and tests for prototype [name of lifesaving equipment addressed by the subpart]

This section would list the prototype tests required for approval of lifesaving equipment addressed by the proposed new subparts. This section would contain the minimum prototype tests required for approval as set forth in part 1 of the IMO Revised recommendation on testing. These tests, as well as Coast Guard interpretations of these tests, are discussed in Table 1: IMO Standards and Coast Guard Proposed Interpretations, above.

This section would also contain the Coast Guard’s proposal that, in general, the Coast Guard would witness all prototype testing, but the Commandant (CG–5214) may delegate this function to an independent laboratory on a case-by-case basis, as discussed above in section *IV.B. Independent Laboratories*.

8. Section 160.[subpart number]–15 Production inspections, tests, quality control, and conformance of [name of lifesaving equipment addressed by the subpart]

This section would list the production tests that would be required for each equipment type and the manufacturer’s and independent laboratory’s

responsibilities for production quality control of Coast Guard approved equipment. This section would contain procedures and standards for production tests as required by IMO Revised recommendation on testing, part 2. Although part 2 addresses both production tests and installation tests, which are performed after the equipment is installed on the parent vessel, this rulemaking only addresses production tests. Production testing would be conducted at the manufacturing facility, prior to delivery to a vessel and is required before the equipment would be marked as Coast Guard approved. Specific production testing and quality control requirements for each equipment type are discussed in Table 1: IMO Standards and Coast Guard Proposed Interpretations, above. Section 160.[subpart number]–15 would also address the manufacturer’s responsibilities for maintaining and keeping records associated with the production process.

Section 160.[subpart number]–15 would cross-reference 46 CFR part 159, subpart 159.007, which contains the Coast Guard’s established procedures for performing production inspections and tests, and proposes to delegate the performance of production testing and oversight of the manufacturer’s quality control plan to the independent laboratory, as discussed above in section *IV.B. Independent Laboratories*.

9. Section 160.[subpart number]–17 Marking and labeling

Section 160.[subpart number]–17 would set forth the proposed markings for approved equipment as required by the LSA Code and the IMO Revised recommendation on testing. This section would dictate the placement and contents of a plate or label for the specific lifesaving equipment addressed by the proposed subpart. This section would require that labeling be in English. The Coast Guard would require all lifesaving equipment affected by this rule to be marked or stamped with the following information: USCG-issued approval number, the word “SOLAS”, manufacturer’s name and address (address may be excluded on release mechanisms for space constraints), identifying information of the independent laboratory, model name and serial number, and month/year of manufacture. The Coast Guard would require lifeboats and rescue boats to be marked with the material of the hull construction, e.g. FRP, their A and B weights (see Table 1: IMO Standards and Coast Guard Proposed Interpretations above), and the number of persons it is certificated to carry. The

Coast Guard would also require all launching appliances and release mechanisms to be marked with their safe working loads. The Coast Guard would also require liferaft automatic disengaging devices to be marked with the number of the test certificate attesting to the static proof test required by the Revised recommendation on testing, part 2/6.2.2.

10. Section 160.[subpart number]–19 Operating instructions and information for the ship's training manual

Section 160.[subpart number]–19 would detail the Coast Guard requirements for the information for the ship's training manual required by SOLAS and would specify that IMO symbols be used to describe location and operation of the equipment. This section would also provide that the instructions and information may be combined with other similar material, but they would have to be available in English and be provided in the form of an instruction placard.

11. Section 160.[subpart number]–21 Operation and maintenance instructions

Section 160.[subpart number]–21 would detail the Coast Guard requirements for the operation and maintenance instructions required by SOLAS and would specify that the instructions follow the general format and content specified in IMO MSC.1 Circular 1205, include a checklist for use in monthly, external visual inspections, and use IMO symbols to describe location and operation of the equipment. This section also would provide that the manual may be combined with other similar material, but it must be available in English.

12. Section 160.[subpart number]–23 Procedure for approval of design, material, or construction change

This section would contain the procedures for requesting approval of a design, material, or construction change to approved equipment addressed by that subpart. This section proposes that manufacturers must submit plans for modifying an approved design following the same procedures as for the original approval set forth in § 160.[subpart number]–9. This section also would require a prototype be built and tested, in accordance with §§ 160.[subpart number]–11 and 160.[subpart number]–13, unless waived by Commandant (CG–5214) if deemed appropriate. Finally, this section proposes to explicitly state that design, material, and construction equivalence determinations may be made by the Commandant (CG–5214) only.

V. Incorporation by Reference

Material proposed for incorporation by reference appears in proposed 46 CFR §§ 160.010–1, 160.051–5, 160.115–5, 160.132–5, 160.133–5, 160.135–5, 160.151–5, 160.156–5, 160.170–5, and 164.017–5. You may inspect this material at U.S. Coast Guard Headquarters where indicated under **ADDRESSES**. Copies of the material are available from the sources listed in paragraph (b) in each of those sections.

Before publishing a binding rule, the Coast Guard will submit this material to the Director of the Federal Register for approval of the incorporation by reference.

VI. Regulatory Analyses

The Coast Guard developed this proposed rule after considering numerous statutes and executive orders related to rulemaking. Below the Coast Guard summarizes these analyses based on 13 of these statutes or executive orders.

A. Regulatory Planning and Review

This proposed rule is not a significant regulatory action under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. OMB has not reviewed it under that Order.

A “Preliminary Regulatory Analysis and Initial Regulatory Flexibility Analysis” is available in the docket where indicated under the “Public Participation and Request for Comments” section of this preamble. A summary of the analysis follows:

As previously discussed, the Coast Guard proposes to amend 46 CFR part 160 to harmonize its regulations with IMO standards governing certain types of lifesaving equipment. The Coast Guard also proposes to incorporate the use of independent laboratories for Coast Guard approval procedures for certain types of lifesaving equipment, including requiring the use of independent laboratories at certain stages of the approval procedures in lieu of Coast Guard personnel who currently perform these inspections and witness these tests.

We expect the proposed changes to harmonize existing regulations with international standards to have no additional costs for manufacturers of lifesaving equipment. In order for their lifesaving equipment to be used on vessels for international voyage from any nation that is a SOLAS signatory, equipment manufacturers must currently comply with the international

standards for lifesaving equipment established by SOLAS. We expect the proposed rule reflects existing industry practices adopted in response to these international standards governing the performance of certain types of lifesaving equipment.

We expect the proposed changes to require the use of independent laboratories in lieu of Coast Guard personnel would result in additional costs for manufacturers of certain types of lifesaving equipment.

Currently, the Coast Guard does not charge for its inspections (although overseas manufacturing facilities reimburse the Coast Guard for travel and subsistence costs of Coast Guard inspectors). The use of independent laboratories required by this proposed rule would create a new cost for manufacturers of lifesaving equipment. However, the costs of inspections by independent laboratories would be partially offset by an overall reduction in the number of inspections made possible through the coordination of independent laboratories.

Manufacturers would be able to schedule inspections and testing for independent laboratories acting on behalf of multiple nations, including the U.S., rather than requiring separate Coast Guard inspections and testing by Coast Guard inspectors. This coordinated use of independent laboratories would avoid multiple inspections and testing of the same equipment (*see* the “Independent Laboratories” section for more details).

We estimate the annual costs to manufacturers for using independent laboratories are approximately \$130,000 for U.S. firms and approximately \$683,000 for foreign firms (undiscounted). Over a 10-year period of analysis, we estimate the total present value costs of the rulemaking are approximately \$913,000 for U.S. firms and approximately \$4.8 million for foreign firms, discounted at seven percent. We estimate the total present value cost of the rulemaking to be about \$5.7 million over a 10-year period of analysis.

The other proposed changes, not resulting from harmonization with internal standards or use of independent laboratories, update Coast Guard regulations to reflect current practice or newer versions of existing standards and have minimal costs. These include an amendment specifying the attachment point for sea anchors to liferafts, and the addition of a new subpart in 46 CFR part 164 addressing resins used in the construction of lifeboats and rescue boats and incorporating the use of equivalent

international standards as an alternative to national consensus standards.

The benefits of the proposed rule include compliance with U.S. obligations as a SOLAS signatory and removing inconsistencies between international standards and the Coast Guard's current regulations. The proposed rule also provides possible savings for manufacturers from coordination efficiencies for inspections and increased efficiency for the Coast Guard from greater flexibility in assigning its human resources, particularly those stationed at overseas Coast Guard offices.

The "Preliminary Regulatory Analysis and Initial Regulatory Flexibility Analysis" available on the docket provides additional detail on the costs and benefits of this rulemaking. The Coast Guard urges interested parties to submit comments that specifically address the economic impacts of this rulemaking. Comments can be made as indicated in the **ADDRESSES** section.

B. Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601–612), we have considered whether this proposed rule would have a significant economic impact on a substantial number of small entities. The term "small entities" comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000.

A combined "Preliminary Regulatory Analysis and Initial Regulatory Flexibility Analysis" discussing the impact of this proposed rule on small entities is available in the docket where indicated under the "Public Participation and Request for Comments" section of this preamble.

We determined that six of the eight U.S. firms manufacturing lifesaving equipment are classified as small entities under the Small Business Administration size standards. We estimate the annual costs to use independent laboratories is less than 0.5 percent of revenue for five of the six small entities and less than 1.25 percent of revenue for one of the six small entities. However, these estimates do not include adjustments for manufacturer savings from the coordinated use of independent laboratories that would avoid multiple inspections and testing of the same equipment (see the "Independent Laboratories" section for more details).

Based on this information, the Coast Guard certifies under 5 U.S.C. 605(b) that this proposed rule would not have

a significant economic impact on a substantial number of small entities. If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this rule would have a significant economic impact on it, please submit a comment to the Docket Management Facility at the address under **ADDRESSES**. In your comment, explain why you think it qualifies and how and to what degree this rule would economically affect it.

C. Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we want to assist small entities in understanding this proposed rule so that they can better evaluate its effects on them and participate in the rulemaking. If the proposed rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please consult Mr. George Grills, P.E., Commercial Regulation and Standard Directorate, Office of Design and Engineering Standards, Lifesaving and Fire Safety Division (CG–5214), Coast Guard, telephone 202–372–1385, or e-mail address George.G.Grills@uscg.mil. The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247).

D. Collection of Information

This proposed rule would call for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The information collected under the proposed rule is addressed in the existing collection of information, OMB control number 1625–0035, title 46 Subchapter Q: Lifesaving, Electrical, and Engineering Equipment, Construction and Materials & Marine Sanitation Devices (33 CFR part 159), which was reviewed by OMB on May 27, 2009 and will expire after the 3-year approval period ending on May 31, 2012, unless renewed. The

proposed rule would increase the total annual collection burden of the existing collection of information by 1.2 percent. The current authorized annual burden is 103,289 hours and the proposed rule would increase the annual burden by approximately 1,221 hours.

The increase in the annual burden is not considered material or substantive. To confirm this, the Coast Guard has submitted a change worksheet (OMB Form 83–C) to OIRA noting the change in the annual burden. The change worksheet is available in the docket where indicated under the "Public Participation and Request for Comments" section of this preamble.

If you submit comments on the collection of information, submit them both to OMB and to the Docket Management Facility as indicated under **ADDRESSES**, by the date under **DATES**.

E. Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them.

The U.S. Supreme Court has long recognized the field preemptive impact of the Federal regulatory regime for inspected vessels. See, e.g., *Kelly v. Washington ex rel Foss*, 302 U.S. 1 (1937) and the consolidated cases of *United States v. Locke and Intertanko v. Locke*, 529 U.S. 89, 113–116 (2000). Therefore the Coast Guard's view is that regulations issued under the authority of 46 U.S.C. 3306 in the areas of design, construction, alteration, repair, operation, superstructures, hulls, fittings, equipment, appliances, propulsion machinery, auxiliary machinery, boilers, unfired pressure vessels, piping, electric installations, accommodations for passengers and crew, sailing school instructors, sailing school students, lifesaving equipment and its use, firefighting equipment, its use and precautionary measures to guard against fire, inspections and tests related to these areas and the use of vessel stores and other supplies of a dangerous nature have preemptive effect over State regulation in these fields, regardless of whether the Coast Guard has issued regulations on the subject or not, and regardless of the existence of conflict between the State and Coast Guard regulation.

While it is well settled that States may not regulate in categories in which Congress intended the Coast Guard to be the sole source of a vessel's obligations, as these categories are within a field foreclosed from regulation by the States

(see *U.S. v. Locke*, above), the Coast Guard recognizes the key role State and local governments may have in making regulatory determinations. Additionally, Sections 4 and 6 of Executive Order 13132 require that for any rules with preemptive effect, the Coast Guard shall provide elected officials of affected State and local governments and their representative national organizations the notice and opportunity for appropriate participation in any rulemaking proceedings, and to consult with such officials early in the rulemaking process. Therefore, we invite affected State and local governments and their representative national organizations to indicate their desire for participation and consultation in this rulemaking process by submitting comments to the docket using one of the methods specified under **ADDRESSES**. In accordance with Executive Order 13132, the Coast Guard will provide a federalism impact statement to document (1) the extent of the Coast Guard's consultation with State and local officials that submit comments to this proposed rule, (2) a summary of the nature of any concerns raised by State or local governments and the Coast Guard's position thereon, and (3) a statement of the extent to which the concerns of State and local officials have been met.

F. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of \$100,000,000 (adjusted for inflation) or more in any one year. Though this proposed rule would not result in such an expenditure, the Coast Guard does discuss the effects of this rule elsewhere in this preamble.

G. Taking of Private Property

This proposed rule would not effect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

H. Civil Justice Reform

This proposed rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

I. Protection of Children

The Coast Guard has analyzed this proposed rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and would not create an environmental risk to health or risk to safety that might disproportionately affect children.

J. Indian Tribal Governments

This proposed rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it would not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

K. Energy Effects

The Coast Guard has analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. The Coast Guard has determined that it is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

L. International Trade Impacts

Under the Trade Agreement Act of 1979 (codified at 19 U.S.C. 2501 *et seq.*), agencies are prohibited from promulgating any standards or engaging in related activities that create unnecessary obstacles to foreign commerce. Because the proposed rule would have an effect on foreign firms, we have also examined the costs and regulatory action to determine if it would constitute an unnecessary obstacle to trade. Because the overall costs are minimal, the requirement for third-party inspections and testing is uniform across product classes, and the requirement for independent third-party testing applies to both domestic and overseas manufacturers, this rule does not constitute an obstacle to trade or a non-tariff barrier to trade.

M. Technical Standards

The National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through OMB, with an explanation of why using these standards would be inconsistent with

applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This proposed rule uses the following voluntary consensus standards:

- ASTM A 36/A 36M–08 Standard Specification for Carbon Structural Steel;
- ASTM A 216/A 216M–08 Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding for High-Temperature Service;
- ASTM A 653/A 653M–08 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process;
- ASTM B 127–05(2009) Standard Specification for Nickel-Copper Alloy (UNS N04400) Plate, Sheet, and Strip;
- ASTM B 209–07 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate;
- ASTM D 543–06 Standard Test Method for Resistance of Plastics to Chemical Reagents;
- ASTM D 570–98(2005) Standard Test Method for Water Absorption of Plastics;
- ASTM D 638–08 Standard Test Method for Tensile Properties of Plastics;
- ASTM D 695–08 Standard Test Method for Compressive Properties of Rigid Plastics;
- ASTM D 790–07e1 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials;
- ASTM D 792–08 Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement;
- ASTM D 1045–08 Standard Methods of Sampling and Testing Plasticizers used in Plastics;
- ASTM D 1824–95(2002) Standard Test Method for Apparent Viscosity of Plastics and Organosols at Low Shear Rates;
- ASTM D 2471–99 Standard Test Method for Gel Time and Peak Exothermic Temperature of Reacting Thermosetting Resins;
- ASTM D 2583–07 Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor;
- ASTM D 2584–08 Standard Test Method of Ignition Loss for Cured Reinforced Resins;
- ASTM D 4029–09 Standard Specification for Finished Woven Glass Fabrics;

- ASTM F 1014–02(2007) Standard Specification for Flashlights on Vessels;
 - ASTM F 1166–07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities;
 - ASTM G 154–06 Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials;
 - International Life-Saving Appliance Code, (IMO Resolution MSC.48(66), as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85));
 - IMO Resolution A.657(16) Instructions for Action in Survival Craft;
 - IMO Resolution A.658(16) Use and Fitting of Retro-reflective Materials on Life-saving Appliances;
 - IMO Resolution A.760(18) Symbols Related to Life-Saving Appliances and Arrangements;
 - IMO Resolution MSC.81(70), Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85);
 - MSC Circular 980, Standardized life-saving appliance evaluation and test report forms;
 - MSC Circular 1006, Guidelines On Fire Test Procedures For Acceptance Of Fire-Retardant Materials For The Construction Of Lifeboats;
 - MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems;
 - ISO 62:2008 Plastics—Determination of water absorption;
 - ISO 175:1999 Plastics—Methods of test for the determination of the effects of immersion in liquid chemicals;
 - ISO 14125:1998 Fibre-reinforced plastic composites—Determination of flexural properties;
 - ISO 527–1:1993 Plastics—Determination of tensile properties;
 - ISO 604:2002 Plastics—Determination of compressive properties;
 - ISO 1172:1996 Textile-glass-reinforced plastics—Prepregs, moulding compounds and laminates—Determination of the textile-glass and mineral-filler content—Calcination methods;
 - ISO 1183–1:2004 Plastics—Methods for determining the density of non-cellular plastics—Part 1: Immersion method, liquid pycnometer method and titration method;
 - ISO 1675:1985 Plastics—Liquid resins—Determination of density by the pycnometer method;
 - ISO 2039–1:2001 Determination of hardness—Part 1: Ball indentation method;
 - ISO 2039–2:1987 Determination of hardness—Part 2: Rockwell hardness;
 - ISO 2114:2000 Plastics (polyester resins) and paints and varnishes (binders)—Determination of partial acid value and total acid value;
 - ISO 2535:2001 Plastics—Unsaturated-polyester resins—Measurement of gel time at ambient temperature;
 - ISO 2555:1989 Plastics—Resins in the liquid state or as emulsions or dispersions—Determination of apparent viscosity by the Brookfield test method;
 - ISO 15372:2000 Ships and marine technology—Inflatable rescue boats—Coated fabrics for inflatable chambers;
 - ISO 15738:2002 Ships and marine technology—Gas inflation systems for inflatable life-saving appliances;
 - ISO 17339:2002 Ships and marine technology—Sea anchors for survival craft and rescue boats;
 - ISO 18813:2006 Ships and marine technology—Survival equipment for survival craft and rescue boats;
 - SAE J1527–93, Marine Fuel Hoses;
 - UL 1102, Standard for Nonintegral Marine Fuel Tanks; and
 - UL 1185, Standard for Portable Marine Fuel Tanks.
- The proposed sections that reference these standards and the locations where these standards are available are listed in 46 CFR 160.010–1, 160.115–5, 160.132–5, 160.133–5, 160.135–5, 160.151–5, 160.156–5, 160.170–5, and 164.017–5.
- This proposed rule also uses technical standards other than voluntary consensus standards. The Coast Guard proposes to use the below-listed standards issued by the Department of Defense and the General Services Administration because the Coast Guard did not find voluntary consensus standards that fulfill the purpose of these standards as applicable to the proposed rule:
- A–A 55308 Cloth And Strip, Laminated Or Coated, Vinyl Nylon Or Polyester, High Strength, Flexible;
 - Federal Standard 595C—Colors Used in Government Procurement;
 - MIL–C–17415E—Cloth, Coated, and Webbing, Inflatable Boat and Miscellaneous Use;
 - MIL–C–19663D: Cloth, Woven Roving, For Plastic Laminate, 4 AUG 1998;
 - MIL–P–17549D(SH): Plastics Laminates, Fibrous Glass Reinforced, Marine, 31 AUG 1981;
 - MIL–P–19644 C—Plastic Molding Material (Polystyrene Foam, Expanded Bead);
 - MIL–P–21929 B—Plastic Material, Cellular Polyurethane, Foam-In-Place, Rigid (2 and 4 Pounds per Cubic Foot);
 - MIL–P–40619 A—Plastic Material, Cellular, Polystyrene (For Buoyancy Applications);
 - MIL–R–7575 C, Resin, Polyester, Low Pressure Laminating, 29 June 1966;
 - MIL–R–21607E(SH), Resins, Polyester, Low Pressure Laminating, Fire-Retardant; 25 May 1990; and
 - MIL–R–24719(SH), Resins, Vinyl Ester, Low Pressure Laminating, 4 May 1989.
- If you disagree with our analysis of the voluntary consensus standards listed above or are aware of voluntary consensus standards that might apply but are not listed, please send a comment to the docket using one of the methods under **ADDRESSES**. In your comment, please explain why you disagree with our analysis and/or identify voluntary consensus standards the Coast Guard has not listed that might apply.

N. Environment

The Coast Guard has analyzed this proposed rule under Department of Homeland Security Directive 023–01 and Commandant Instruction M16475.ID, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f), and have made a preliminary determination that this action is one of a category of actions which do not individually or cumulatively have a significant effect on the human environment. A preliminary environmental analysis checklist supporting this determination is available in the docket where indicated under the “Public Participation and Request for Comments” section of this preamble. This rule involves requiring manufacturers of lifesaving equipment to use qualified independent laboratories and updating technical requirements for some lifesaving equipment. As such, it would be categorically excluded under Section 2.B.b, Figure 2.1 paragraph (34)(b) and (d), of the Instruction, which covers regulations concerning delegating authority, manning, documents, admeasurements, inspection, and equipping of vessels; and paragraph 6(a) of the National Environmental Policy Act: Coast Guard Procedures for Categorical Exclusions (67 FR 141, 48243 (July 23, 2002)), which covers regulations concerning vessel operation safety standards because this rule pertains to regulations concerning delegating authority and the inspection and equipping of vessels, as well as vessel operation safety standards, equipment approval, and equipment carriage requirements. The Coast Guard seeks any comments or information that may lead to the discovery of a significant environmental impact from this proposed rule.

List of Subjects

46 CFR Part 108

Fire prevention, Marine safety, Occupational safety and health, Oil and gas exploration, Vessels.

46 CFR Part 117

Marine safety, Passenger vessels.

46 CFR Part 133

Cargo vessels, Marine safety, Reporting and recordkeeping requirements.

46 CFR Part 160

Marine safety, Incorporation by reference, Reporting and recordkeeping requirements.

46 CFR Part 164

Fire prevention, Incorporation by reference, Marine safety, Reporting and recordkeeping requirements.

46 CFR Part 180

Marine safety, Passenger vessels.

46 CFR Part 199

Cargo vessels, Marine safety, Oil and gas exploration, Passenger vessels, Reporting and recordkeeping requirements.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 46 CFR parts 108, 117, 133, 160, 164, 180, and 199 as follows:

PART 108—DESIGN AND EQUIPMENT

1. The authority citation for part 108 continues to read as follows:

Authority: 43 U.S.C. 1333; 46 U.S.C. 3102, 3306; Department of Homeland Security Delegation No. 0170.1.

2. Revise § 108.550(a) to read as follows:

§ 108.550 Survival craft launching and recovery arrangements: General.

(a)(1) Each launching appliance must be a davit approved under 46 CFR part 160, subpart 160.132 for use with the intended craft, with a winch approved under 46 CFR part 160, subpart 160.115 for use with the intended craft.

(2) Each launching appliance for a davit-launched liferaft must include an automatic disengaging apparatus approved under 46 CFR part 160, subpart 160.170 and be either—

(i) A launching appliance described in (a)(1) of this section; or

(ii) A launching appliance approved on or before (EFFECTIVE DATE OF FINAL RULE) under approval series 160.163.

* * * * *

PART 117—LIFESAVING EQUIPMENT AND ARRANGEMENTS

3. The authority citation for part 117 continues to read as follows:

Authority: 46 U.S.C. 2103, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

4. In § 117.150, revise paragraph (a) and add paragraph (c) to read as follows:

§ 117.150 Survival craft embarkation arrangements.

(a) A launching appliance described in paragraph (c) of this section, or a marine evacuation system approved under approval series 160.175, must be provided for each inflatable liferaft and inflatable buoyant apparatus when either—

* * * * *

(c) Each launching appliance for a davit-launched liferaft must include an automatic disengaging apparatus approved under 46 CFR part 160, subpart 160.170 and be either—

(1) A davit approved under 46 CFR part 160, subpart 160.132 for use with a liferaft, with a winch approved under 46 CFR part 160, subpart 160.115 for use with a liferaft; or

(2) A launching appliance approved on or before (EFFECTIVE DATE OF FINAL RULE) under approval series 160.163.

PART 133—LIFESAVING SYSTEMS

5. The authority citation for part 133 continues to read as follows:

Authority: 46 U.S.C. 3306, 3307; Department of Homeland Security Delegation No. 0170.1.

6. Revise § 133.150(b) to read as follows:

§ 133.150 Survival craft launching and recovery arrangements: General.

* * * * *

(b)(1) Each launching appliance must be a davit approved under 46 CFR part 160, subpart 160.132 for use with the intended craft, with a winch approved under 46 CFR part 160, subpart 160.115 for use with the intended craft.

(2) Each launching appliance for a davit-launched liferaft must include an automatic disengaging apparatus approved under 46 CFR part 160, subpart 160.170 and be either—

(i) A launching appliance described in (b)(1) of this section; or

(ii) A launching appliance approved on or before (EFFECTIVE DATE OF FINAL RULE) under approval series 160.163.

* * * * *

PART 160—LIFESAVING EQUIPMENT

7. The authority citation for part 160 continues to read as follows:

Authority: 46 U.S.C. 2103, 3306, 3703 and 4302; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

Subpart 160.010—Buoyant Apparatus for Merchant Vessels

8. Revise § 160.010–1 to read as follows:

§ 160.010–1 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the Federal Register and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, it is available for inspection at COMMANDANT (CG-5214), U.S. COAST GUARD, 2100 2ND ST, SW., STOP 7126, WASHINGTON, DC 20593-7126 and is available from the sources indicated in this section.

(b) General Services Administration, Federal Acquisition Service, Office of the FAS Commissioner, 22200 Crystal Drive, 11th Floor, Arlington, VA 22202, 703-605-5400.

(1) Federal Standard 595C—Colors Used in Government Procurement, IBR approved for § 160.010–5 (“FED–STD–595C”).

(2) [Reserved]

(c) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, http://www.imo.org/.

(1) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for § 160.010–3 (“IMO LSA Code”).

(2) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for § 160.010–3 (“IMO Revised recommendation on testing”).

(d) Military Specifications and Standards, Standardization Order Desk, Building 4D, 700 Robins Avenue,

Philadelphia, PA 19111-5094, <https://assist.daps.dla.mil/quicksearch/>.

(1) MIL-P-19644 C—Plastic Molding Material (Polystyrene Foam, Expanded Bead), IBR approved for § 160.010-5 (“MIL-P-19644 C”).

(2) MIL-P-21929 B—Plastic Material, Cellular Polyurethane, Foam-In-Place, Rigid (2 and 4 Pounds per Cubic Foot), IBR approved for § 160.010-5 (“MIL-P-21929 B”).

(3) MIL-P-40619 A—Plastic Material, Cellular, Polystyrene (For Buoyancy Applications), IBR approved for § 160.010-5 (“MIL-P-40619 A”).

(4) MIL-R-21607E(SH), Resins, Polyester, Low Pressure Laminating, Fire-Retardant, 25 May 1990, IBR approved for § 160.010-5 (“MIL-R-21607E(SH)”).

9. In § 160.010-2, revise the definition for “Commandant” to read as follows:

§ 160.010-2 Definitions.

* * * * *

Commandant means the Commandant (CG-5214), U.S. COAST GUARD, 2100 2ND ST, SW., STOP 7126, WASHINGTON, DC 20593-7126.

* * * * *

10. In § 160.010-3—

a. In paragraph (a)(1), remove the words “(SOLAS Chapter III, regulation 38, paragraph 1.5 (III/38.1.5))” and add, in their place, the words “(IMO LSA Code, Chapter IV/4.1.1.5 (incorporated by reference, see § 160.010-1))”;

b. In paragraph (a)(2), remove the words “(Regulation III/38.2.1)” and add, in their place, the words “(IMO LSA Code, Chapter IV/4.1.2.1)”;

c. In paragraph (a)(3), remove the words “(Regulation III/39.2.2)” and add, in their place, the words “(IMO LSA Code, Chapter IV/4.2.2.2)”;

d. In paragraph (a)(4), remove the words “(Regulation III/39.5.1)” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.5.4”;

e. In paragraph (a)(5), remove the words “(Regulation III/39.5.2)” and add, in their place, the words “(IMO LSA Code, Chapter IV/4.2.5.2)”;

f. In paragraph (a)(9), remove the words “(Regulation III/39.4.1)” and add, in their place, the words “(IMO LSA Code, Chapter IV/4.2.4.1)”;

g. In paragraph (a)(10), remove the words “(Regulation III/39.4.2)” and add, in their place, the words “(IMO LSA Code, Chapter IV/4.2.4.2)”;

h. In paragraph (a)(11), remove the symbol “S” and add, in its place, the words “46 CFR”; and remove the words “of this subchapter”;

i. In paragraph (a)(12), in the introductory text after the word “Equipment”, remove the words “(Regulation III/38.5.1)” and in the last

sentence in the introductory text, remove the words “Regulation III/38.5.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5”;

j. In paragraph (a)(13), remove the words “(Regulations III/39.7.3.4, III/39.7.3.5, and III/39.8.6)” and add, in their place, the words “requirements of § 160.151-33”, add the words “as well as IMO LSA Code, Chapter IV/4.2.6.3 and 4.2.7.1.6”; and remove the words “regulation III/39.8.6” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.7.1.6”;

k. In paragraph (a)(14), remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing (incorporated by reference, see § 160.010-1)”;

l. In paragraphs (a)(15) and (a)(16), remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing”;

m. In paragraph (e) introductory text, remove the words “under the IMO International Code of Safety for High-Speed Craft (HSC Code)” and remove the words “Annex 10 to the HSC Code” and add, in their place, the words “Annex 11 to IMO Res. MSC.97(73)” and

n. Add paragraph (e)(9) to read as follows:

§ 160.010-3 Inflatable buoyant apparatuses.

* * * * *

(e) * * *

(9) *Stability*. It must be fitted with stability pockets, in accordance with IMO LSA Code Chapter IV/4.2.5.4.

§ 160.010-4 [Amended]

11. In § 160.010-4—

a. In paragraph (g), remove the word “(1/4in.)” and add, in its place, the words “(1/4 in.)”; and

b. In paragraph (n), remove the words “sections 13 and 14 of the “Color Names Dictionary”” and add, in their place, the words “sections 13 and 14 of FED-STD-595C (incorporated by reference, see § 160.010-1)”.

§ 160.010-5 [Amended]

12. In § 160.010-5—

a. In paragraph (b) introductory text, remove the text “(CG-521)” and add, in its place, the text “(CG-5214)”;

b. In paragraph (b)(2), remove the text “MIL-P-19644” and add, in its place, the text “MIL-P-19644 C (incorporated by reference, see § 160.010-1)”;

c. In paragraph (b)(3), remove the text “MIL-P-21929” and add, in its place, the text “MIL-P-21929 B (incorporated by reference, see § 160.010-1)”;

d. In paragraph (b)(4), remove the text “MIL-P-40619” and add, in its place, the text “MIL-P-40619 A (incorporated by reference, see § 160.010-1)”;

e. In paragraph (c)(1), remove the text “MIL-P-21607” and add, in its place, the text “MIL-P-21607E(SH) (incorporated by reference, see § 160.010-1)” and remove the text “(G-MSE)” and add, in its place, the text “(CG-5214)” and

f. In paragraphs (c)(2) and (c)(3), remove the text “(CG-521)” and add, in its place, the text “(CG-5214)”.

§ 160.010-7 [Amended]

13. In § 160.010-7(a), remove the text “CG-512” and add, in its place, the text “CG-5214”.

Subpart 160.015 [Removed and Reserved]

14. Remove and reserve subpart 160.015.

Subpart 160.032 [Removed and Reserved]

15. Remove and reserve subpart 160.032.

Subpart 160.033 [Removed and Reserved]

16. Remove and reserve subpart 160.033.

Subpart 160.035 [Removed and Reserved]

17. Remove and reserve subpart 160.035.

Subpart 160.051—Inflatable Liferrafts for Domestic Service

18. Revise § 160.051-1 to read as follows:

§ 160.051-1 Scope.

(a) This subpart prescribes requirements for approval by the Coast Guard of A, B, and Coastal Service inflatable liferafts for use only in domestic service. These liferafts must comply with all of the requirements for SOLAS A and SOLAS B liferafts in subpart 160.151 except as specified in this subpart.

(b) This subpart does not apply to any A, B, and Coastal Service inflatable liferaft for use only in domestic service that has been approved by the Coast Guard before (EFFECTIVE DATE OF FINAL RULE), so long as the liferaft satisfies the annual servicing requirements set forth in 46 CFR 160.151-57.

19. In § 160.051-3, add the definition for “Commandant”, in alphabetical order, as follows:

§ 160.051–3 Definitions.

* * * * *

Commandant means the Commandant (CG–5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593–1726.

20. Redesignate §§ 160.051–5, 160.051–7, and 160.051–9 as §§ 160.051–7, 160.051–9, and 160.051–11, respectively.

21. Add new § 160.051–5 to read as follows:

§ 160.051–5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal-register/code_of_federal_regulations/ibr_locations.html. Also, it is available for inspection at COMMANDANT (CG–5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593–7126 and is available from the sources indicated in this section.

(b) International Maritime Organization (IMO) Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for §§ 160.051–7 and 160.051–9 (“IMO LSA Code”).

(2) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for §§ 160.051–7, 160.051–9, and 160.051–11 (“IMO Revised recommendation on testing”).

§ 160.051–7 [Amended]

22. In newly redesignated § 160.051–7—

a. In paragraph (a), remove the words “Regulation III/38.1.5” and add, in their place, the words “IMO LSA Code Chapter IV/4.1.1.5, (incorporated by reference, see § 160.051–5)”;

b. In paragraph (b), remove the first instance of the words “Regulation III/38.1.5.5” and add, in their place, the

words “IMO LSA Code, Chapter IV/4.1.1.5.5”; and after the words “the viewing port”, remove the words “described in Regulation III/38.1.5.5”;

c. In paragraph (c), remove the first instance of the words “Regulation III/38.1.5.6” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.1.5.6”; and after the words “means of rainwater collection”, remove the words “described in Regulation III/38.1.5.6”;

d. In paragraph (d), remove the words “Regulation III/38.2.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.2.1”;

e. In paragraph (e), remove the words “Regulation III/39.2.2” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.2.2”;

f. In paragraph (f), remove the words “Regulation III/39.4.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.4.1”;

g. In paragraph (g), remove the words “Regulation III/39.5.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.5”;

h. In paragraph (h), remove the first instance of the words “Regulation III/39.6.3” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.3.4”; and after the words “controlled interior lamp”, remove the words “described in Regulation III/39.6.3”;

i. In paragraph (i), remove the words “Regulations III/39.7.3.4 and III/39.7.3.5” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.3.6”;

j. In paragraph (j), remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing (incorporated by reference, see § 160.051–5)”;

k. In paragraphs (k) and (l), remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing”.

§ 160.051–9 [Amended]

23. In newly redesignated § 160.051–9—

a. In paragraph (a), remove the words “Regulation III/38.2.1” and add, in their place, the words “IMO LSA Code Chapter IV/4.1.2.1”;

b. In paragraph (b), remove the words “Regulations III/39.7.3.4 and III/39.7.3.5” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.6.3”.

§ 160.051–11 [Amended]

24. In newly redesignated § 160.051–11, in paragraph (f), remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing

(incorporated by reference, see § 160.051–5)”.

25. Add subpart 160.115 to read as follows:

Subpart 160.115—Launching Appliances—Winches

Sec.

- 160.115–1 Scope.
- 160.115–3 Definitions.
- 160.115–5 Incorporation by reference.
- 160.115–7 Design, construction, and performance of winches.
- 160.115–9 Preapproval review.
- 160.115–11 [Reserved]
- 160.115–13 Approval inspections and tests for prototype winches.
- 160.115–15 Production inspections, tests, quality control, and conformance of winches.
- 160.115–17 Marking and labeling.
- 160.115–19 Operating instructions and information for the ship’s training manual.
- 160.115–21 Operation and maintenance instructions.
- 160.115–23 Procedure for approval of design or material change.

Subpart 160.115—Launching Appliances—Winches**§ 160.115–1 Scope.**

This subpart prescribes standards, tests, and procedures for seeking Coast Guard approval of a winch used in conjunction with a davit approved under 46 CFR part 160, subpart 160.132 for lifeboats approved under 46 CFR part 160, subpart 160.135, liferafts approved under 46 CFR part 160, subparts 160.051 or 160.151, and rescue boats approved under 46 CFR part 160, subparts 160.056 or 160.156.

§ 160.115–3 Definitions.

In addition to the definitions in the IMO LSA Code (incorporated by reference, see § 160.115–5), in this subpart, the term:

Commandant means the Commandant (CG–5214), U.S. COAST GUARD, 2100 2ND ST. SW., STOP 7126, WASHINGTON, DC 20593–7126.

Independent laboratory has the same meaning as 46 CFR 159.001–3. A list of accepted independent laboratories is available from the Commandant and online at <http://cgmix.uscg.mil>.

Officer In Charge, Marine Inspection (OCMI) means an officer of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in part 1 of this chapter, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The “cognizant OCMI” is the OCMI who has immediate

jurisdiction over a vessel for the purpose of performing the duties previously described.

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.

§ 160.115–5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to <http://www.archives.gov/federal-register/code-of-federal-regulations/ibr-locations.html>. Also, it is available for inspection at COMMANDANT (CG–5214), U.S. COAST GUARD, 2100 2ND ST. SW., STOP 7126, WASHINGTON, DC 20593–7126 and is available from the sources indicated in this section.

(b) International Maritime Organization (IMO) Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution A.760(18), Symbols Related to Life-Saving Appliances and Arrangements, IBR approved for § 160.115–19 (“IMO Res. A.760(18)”).

(2) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for § 160.115–7 (“IMO LSA Code”).

(3) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for §§ 160.115–7, 160.115–13, and 160.115–15 (“IMO Revised recommendation on testing”).

(4) MSC Circular 980, Standardized life-saving appliance evaluation and test report forms, IBR approved for § 160.115–13 (“IMO MSC Circ. 980”).

(5) MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems, IBR approved for § 160.115–21 (“IMO MSC.1 Circ. 1205”).

§ 160.115–7 Design, construction, and performance of winches.

(a) To seek Coast Guard approval of a winch, a manufacturer must comply

with, and each winch must meet, the requirements of the following—

(1) IMO LSA Code, Chapter I/1.2.2 and Chapter VI/6.1.1 and 6.1.2 (incorporated by reference, see § 160.115–5) applicable to the design and intended service of the winch;

(2) IMO Revised recommendation on testing, Part 1/8.1 (incorporated by reference, see § 160.115–5) applicable to the winch;

(3) 46 CFR part 159; and

(4) This subpart.

(b) Each winch must meet each of the following requirements:

(1) *Materials.* (i) All gears must be machine cut and made of steel, bronze, or other suitable materials properly keyed to shafts. The use of cast iron is not permitted for these parts.

(ii) Metals in contact with each other must be either galvanically compatible or insulated with suitable non-porous materials. Provisions must also be made to prevent loosening or tightening resulting from differences of thermal expansion, freezing, buckling of parts, galvanic corrosion, or other incompatibilities.

(iii) Screws, nuts, bolts, pins, keys, and other similar hardware, securing moving parts must be fitted with suitable lock washers, cotter pins, or locks to prevent them from coming adrift.

(2) *Bearings and gears.* (i) Positive means of lubrication must be provided for all bearings.

(ii) When worm gears are used, the worm wheel must operate in an oil bath. Means to easily check the oil level in the gear case must be provided.

(iii) The manufacturer must furnish a lubrication chart and a plate attached to the winch indicating the lubricant recommended for extremes in temperature.

(3) *Guards.* All moving parts must have suitable guards.

(4) *Welding.* Welding must be performed by welders certified by the Commandant, American Bureau of Shipping, U.S. Navy, or an independent laboratory accepted by the Commandant. Only electrodes intended for use with the material being welded may be used. All welds must be checked using appropriate non-destructive tests.

(5) *Winch drums.* (i) A winch must have grooved drums unless otherwise approved by the Commandant.

(ii) The diameter of the drums must be at least 16 times the diameter of the falls.

(iii) Drums must be so arranged as to keep the falls separate, and to pay out the falls at the same rate. Clutches between drums are not permitted unless bolted locking devices are used.

(6) *Winch motors.* For a winch powered by electric or hydraulic motors, or portable power units such as air or electric drills—

(i) Positive means must be provided for controlling the power to the winch, arranged so that the operator must hold the master switch or controller in the “on” or “hoist” position for hoisting, and when released, will immediately shut off the power;

(ii) A clutch must be fitted to disengage the power installation during the lowering operation;

(iii) A means must be provided to disconnect power to the winch before a hand crank can be engaged with the winch operating shaft, and this interruption of power must be maintained while the hand crank is so engaged;

(iv) The air or electric power outlet for a portable power unit must be located adjacent to the winch where the unit is to be coupled, and the outlet must be interconnected with, and protected by, the same system of safety devices as required for a winch with built-in-motors;

(v) A main line emergency disconnect switch, the opening of which disconnects all electrical potential to the winch, must be provided. This switch must be located in a position accessible to the person in charge of the boat stowage and must be in a position from which the movement of both davit arms can be observed as they approach the final stowed position;

(vi) Limit switches, one for each davit arm, must be provided to limit the travel of the davit arms as they approach the final stowed position. These switches must—

(A) Be so arranged that the opening of either switch will disconnect all electrical potential of the circuit in which the switches are connected;

(B) Be arranged to stop the travel of the davit arms not less than 12 inches from their final stowed position; and

(C) Remain open until the davit arms move outboard beyond the tripping position of the switches;

(vii) Motor clutches, when used, must be of either frictional or positive engaging type. When one motor is used for two winches, the clutch must be so arranged that only one winch may be engaged at any one time. The clutch operating lever must be capable of remaining in any position when subject to vibration and must be so arranged that when in neutral position both lifeboats may be lowered simultaneously;

(viii) Motors, switches, controls, and cables must be waterproof if installed on an open deck. Controls may be of the

drip-proof type if installed in a deck house or under deck;

(ix) Hydraulic systems must be in accordance with 46 CFR part 58, subpart 58.30; and

(x) Electrical installations must comply with 46 CFR 111.01–9, 111.01–11, 111.01–19, 111.25, 111.55, 111.70, and 111.95.

(7) *Quick return.* For a winch used to launch an inflatable liferaft means must be provided for rapidly retrieving the falls by hand power.

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

§ 160.115–9 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 winch, 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 number, and issue date;

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

(3) Stress calculations for all load carrying parts;

(4) An operation, maintenance, and training manual as described in §§ 160.115–19 and 160.115–21 of this subpart;

(5) A description of the quality control procedures and recordkeeping that will apply to the production of the winch, 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 and joints, including welding inspection procedures; and

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

(6) Any other drawing(s) necessary to show that the winch complies with the requirements of this subpart;

(7) The location or address of all manufacturing sites, including the name and address of any subcontractors,

where the winch will be constructed; and

(8) The name of the independent laboratory that will perform the duties prescribed in § 160.115–15 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.* All 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 winch meets the construction requirements of this subpart;

(3) Accurately depict the proposed winch;

(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.

§ 160.115–11 [Reserved]

§ 160.115–13 Approval inspections and tests for prototype winches.

(a) If the manufacturer is notified that the information submitted in accordance with § 160.115–9 of this subpart is satisfactory to the Commandant, the manufacturer may proceed with fabrication of the prototype winch and the approval inspections and tests required under this section.

(b) Except as provided in paragraph (f) of this section, the Coast Guard must conduct the approval inspections and witness the approval tests required under this section.

(c) *Manufacturer requirements.* To proceed with approval inspections and

tests required by this section, the manufacturer must—

(1) Notify the Commandant and cognizant Officer in Charge, Marine Inspection (OCMI) of where the approval inspections and tests required under this section will take place, and such notifications must be in sufficient time to allow making travel arrangements;

(2) Arrange a testing schedule that allows for a Coast Guard inspector to travel to the site where the testing is to be performed;

(3) Admit the Coast Guard inspector to any place where work or testing is performed on winches or their component parts and materials for the purpose of—

(i) Conducting inspections as necessary to determine that the prototype—

(A) Conforms with the plans reviewed under § 160.115–9 of this subpart;

(B) Is constructed by the methods and with the materials specified in the plans reviewed under § 160.115–9 of this subpart; and

(C) When welding is part of the construction process, is constructed by the welding procedure and materials as per the plans reviewed under § 160.115–9 of this subpart and the welders are appropriately qualified;

(ii) Assuring that the quality-assurance program of the manufacturer is satisfactory;

(iii) Witnessing tests; and

(iv) Taking samples of parts or materials for additional inspections or tests; and

(4) Make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of winches, together with records identifying the lot or serial numbers of the winches in which such materials were used.

(d) *Tests—(1) IMO Revised recommendation on testing.* Each prototype winch of each design must pass each of the tests described in IMO Revised recommendation on testing, Part 1, paragraph 8.1 (incorporated by reference, see § 160.115–5) applicable to winches.

(2) *Visual inspection.* Each winch must be visually inspected to confirm—

(i) Compliance with this subpart;

(ii) Conformance with the examined plans; and

(iii) Ease of operation and maintenance.

(3) *Hydraulic controls.* If the winch motor includes a fluid power and control system, a test of the hydraulic controls must be conducted in accordance with 46 CFR 58.30–35.

(e) *Test waiver.* The Commandant may waive certain tests for a winch

similar in construction to a winch that has successfully completed the tests.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness approval tests required by this section so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005–9(a)(5) by preparing and submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, see § 160.115–5). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as permitted under paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final version of the plans required under § 160.115–9 of this subpart in triplicate.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005–13.

§ 160.115–15 Production inspections, tests, quality control, and conformance of winches.

(a) Unless the Commandant directs otherwise, an independent laboratory must conduct or witness inspections, tests, and oversight required by this section. Production inspections and tests of a winch 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 production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer's responsibility.* The manufacturer must—

(1) Institute a quality control procedure to ensure that all production winches are produced to the same standard, and in the same manner, as the prototype winch approved by the Commandant. The manufacturer's

quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) to ensure that all tests are performed as described in this section;

(3) Submit to the Commandant a yearly report that contains the following—

(i) Serial number and date of final assembly of each winch constructed;

(ii) The name of the representative of the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section); and

(iii) Name of the vessel and company receiving the winch, if known;

(4) Ensure that the arrangement and materials entering into the construction of the winch are in accordance with plans approved under § 160.115–13(h) of this subpart;

(5) Allow an independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) access to any place where materials are stored for the winch, work or testing is performed on winches or their component parts and materials, or records are retained to meet the requirements of paragraph (c) of this section, below, for the purpose of—

(i) Assuring that the quality control program of the manufacturer is satisfactory;

(ii) Witnessing tests; or

(iii) Taking samples of parts or materials for additional inspections or tests; and

(6) Ensure that the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) conducts the inspections and witnesses the tests required by paragraph (e) of this section, and further conducts a visual inspection to verify that the winches are being made in accordance with the plans approved under § 160.115–13(h) of this subpart and the requirements of this subpart.

(c) *Recordkeeping.* The manufacturer must maintain records in accordance with 46 CFR 159.007–13. The manufacturer must keep records of all items listed in this section for at least 5 years from the date of termination of approval of each winch. The records must include—

(1) A copy of this subpart, other CFR sections referenced in this subpart, and each document listed in § 160.115–5 of this subpart;

(2) A copy of the approved plans, documentation, and certifications;

(3) A current certificate of approval for each approved winch;

(4) Affidavits, certificates, or invoices from the suppliers identifying all essential materials used in the production of approved winches, together with records identifying the serial numbers of the winches in which such materials were used;

(5) Records of all structural welding and name of operator(s);

(6) Records of welder certificates, training, and qualifications;

(7) Date and results of calibration of test equipment and the name and address of the company or agency that performed the calibration;

(8) The serial number of each production winch, along with records of its inspections and tests carried out under this section; and

(9) The original purchaser of each winch and the vessel on which it was installed, if known.

(d) *Independent laboratory responsibility.* The independent laboratory must perform or witness the inspections and tests under this section for each Coast Guard-approved winch to be installed on a U.S. flag vessel. If the manufacturer also produces winches for approval by other maritime safety administrations, the inspections may be coordinated with inspection visits for those administrations.

(e) *Production inspections and tests.*

(1) Each approved winch must be inspected and tested in accordance with the procedures in 46 CFR part 159, subpart 159.007 and the brake test described in IMO Revised recommendation on testing, Part 2, paragraph 6.1.1 (incorporated by reference, see § 160.115–5).

(2) The lowering tests described in IMO Revised recommendation on testing, Part 2, paragraph 6.1 may be performed if the installation height is known. If these tests are performed, the results must be in accordance with 46 CFR 199.153(h) through (j).

§ 160.115–17 Marking and labeling.

(a) Each winch must be marked with a plate or label permanently affixed in a conspicuous place readily accessible for inspection and sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the winch.

(b) The plate or label must be in English, but may also be in other languages.

(c) The plate or label must contain the—

(1) Name and address of the manufacturer;

(2) Manufacturer's model identification;

(3) Name of the independent laboratory that witnessed the prototype or production tests;

(4) Serial number of the winch;

(5) U.S. Coast Guard approval number;

(6) Month and year of manufacture;

(7) Safe working load of the winch; and

(8) Word "SOLAS".

§ 160.115–19 Operating instructions and information for the ship's training manual.

(a) Each winch must have instructions and information for the ship's training manual that use the symbols from IMO Res. A.760(18) (incorporated by reference, see § 160.115–5) to describe the location and operation of the winch.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their complete launching systems.

(c) The winch manufacturer must make operating instructions and information required by paragraph (a) of this section available in English to the purchaser of a winch approved by the Coast Guard.

§ 160.115–21 Operation and maintenance instructions.

(a) Each winch must have operation and maintenance instructions that—

(1) Follows the general format and content specified in IMO MSC.1 Circ. 1205 (incorporated by reference, see § 160.115–5); and

(2) Includes a checklist for use in monthly, external visual inspections of the winch.

(b) The winch manufacturer must make the manual required by paragraph (a) of this section available in English to the purchaser of a winch approved by the Coast Guard.

(c) The operation and maintenance instructions required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their complete launching systems.

§ 160.115–23 Procedure for approval of design or material change.

(a) Each change in design, material, or construction from the plans approved under 46 CFR 159.005–13 and § 160.115–13(h) of this subpart must be approved by the Commandant before being used in any production winch. The manufacturer must submit any such change following the procedures in § 160.115–9 of this subpart, but documentation on items that are unchanged from the plans approved under 46 CFR 159.005–13 and § 160.115–13(h) of this subpart need not be resubmitted.

(b) Unless determined by the Commandant to be unnecessary, a prototype winch with each change described in paragraph (a) of this section must be made and tested according to the procedures for new approvals in §§ 160.115–9 through 160.115–13 of this subpart.

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

26. Add subpart 160.132 to read as follows:

Subpart 160.132—Launching Appliances—Davits

Sec.

160.132–1 Scope.

160.132–3 Definitions.

160.132–5 Incorporation by reference.

160.132–7 Design, construction, and performance of davits.

160.132–9 Preapproval review.

160.132–11 [Reserved]

160.132–13 Approval inspections and tests for prototype davits.

160.132–15 Production inspections, tests, quality control, and conformance of davits.

160.132–17 Marking and labeling.

160.132–19 Operating instructions and information for the ship's training manual.

160.132–21 Operation and maintenance instructions.

160.132–23 Procedure for approval of design or material change.

Subpart 160.132—Launching Appliances—Davits

§ 160.132–1 Scope.

This subpart prescribes standards, tests, and procedures for seeking Coast Guard approval of a davit used in conjunction with a winch approved under 46 CFR part 160, subpart 160.115 for lifeboats approved under 46 CFR part 160, subpart 160.135, liferafts approved under 46 CFR part 160, subparts 160.051 or 160.151, and rescue boats approved under 46 CFR part 160, subparts 160.056 or 160.156.

§ 160.132–3 Definitions.

In addition to the definitions in the IMO LSA Code (incorporated by reference, see § 160.132–5), in this subpart, the term:

Commandant means the Commandant (CG–5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593–7126.

Independent laboratory has the same meaning as 46 CFR 169.001–3. A list of accepted independent laboratories is available from the Commandant and online at <http://cgmix.uscg.mil>.

Officer In Charge, Marine Inspection (OCMI) means an officer of the Coast Guard designated as such by the Commandant and who, under the

direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in part 1 of this chapter, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The "cognizant OCMI" is the OCMI who has immediate jurisdiction over a vessel for the purpose of performing the duties previously described.

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.

§ 160.132–5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, it is available for inspection at COMMANDANT (CG–5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593–7126 and is available from the sources indicated in this section.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428–2959.

(1) ASTM A 36/A 36M–08 Standard Specification for Carbon Structural Steel, IBR approved for § 160.132–7 ("ASTM A 36").

(2) ASTM A 216/A 216M–08 Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding for High-Temperature Service, IBR approved for § 160.132–7 ("ASTM A 216").

(c) International Maritime Organization (IMO) Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution A.760(18), Symbols Related to Life-Saving Appliances and Arrangements, IBR approved for § 160.132–19 ("IMO Res. A.760(18)").

(2) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for §§ 160.132–7, 160.132–13, and 160.132–

15 (“IMO revised recommendation on testing”).

(3) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for § 160.132–7 (“IMO LSA Code”).

(4) MSC Circular 980, Standardized life-saving appliance evaluation and test forms, IBR approved for § 160.132–13 (“IMO MSC Circ. 980”).

(5) MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems, IBR approved for § 160.132–21 (“IMO MSC.1 Circ. 1205”).

§ 160.132–7 Design, construction, and performance of davits.

(a) To seek Coast Guard approval of a davit, a manufacturer must comply with, and each davit must meet, the requirements of following—

(1) IMO LSA Code Chapter I/1.2.2 and Chapter VI/6.1.1 through 6.1.5 (incorporated by reference, see § 160.132–5) applicable to the design and intended service of the davit;

(2) IMO Revised recommendation on testing, Part 1/8.1 (incorporated by reference, see § 160.132–5) applicable to the design and intended service of the davit;

(3) 46 CFR part 159; and

(4) This subpart.

(b) Each davit must meet the following requirements—

(1) *Materials.* Each major structural component of each davit must be constructed of steel. Other materials may be used if accepted by the Commandant as equivalent or superior—

(i) Structural steel made by the open-hearth or electric furnace process must be in accordance with ASTM A 36 (incorporated by reference, see § 160.132–5);

(ii) Steel castings not intended for fusion welding must be in accordance with ASTM A 36, Grades U–60–30, 60–30, 65–30, 65–35, and 70–36;

(iii) Steel castings intended to be fabricated by fusion welding must be in accordance with ASTM A 216 (incorporated by reference, see § 160.132–5), Grades WCA and WCB;

(iv) Cast iron must not be used in the construction of a davit; and

(v) Metals in contact with each other must be either galvanically compatible or insulated with suitable non-porous materials. Provisions must also be made to prevent loosening or tightening resulting from differences of thermal expansion, freezing, buckling of parts, galvanic corrosion, or other incompatibilities;

(2) *Bearings.* (i) Bearings must be of non-ferrous metal, or must be of the roller or ball-bearing type;

(ii) Positive means of lubrication must be provided; and

(iii) The manufacturer must furnish a lubrication chart for each davit together with a plate attached to the davit indicating the lubricants recommended for extremes in temperature;

(3) *Guards.* All moving parts must have guards;

(4) *Welding.* Welding must be performed by welders certified by the Commandant, American Bureau of Shipping, U.S. Navy, or an independent laboratory accepted by the Commandant. Only electrodes intended for use with the material being welded may be used. All welds must be checked using appropriate non-destructive tests; and

(5) *Hydraulic systems,* if installed, must be in accordance with 46 CFR part 58, subpart 58.30.

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

§ 160.132–9 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 davit, 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) Stress calculations for all load carrying parts;

(4) An operation, maintenance, and training manual as described in §§ 160.132–19 and 160.132–21 of this subpart;

(5) A description of the quality control procedures and recordkeeping that will apply to the production of the davit, 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 and joints, including welding inspection procedures; and

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

(6) Any other drawing(s) necessary to show that the davit complies with the requirements of this subpart;

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

(8) The name of the independent laboratory that will perform the duties prescribed in § 160.132–15 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 subpart 159.010.

(d) *Plan quality.* All 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 davit meets the construction requirements of this subpart;

(3) Accurately depict the proposed davit;

(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.

§ 160.132–11 [Reserved]

§ 160.132–13 Approval inspections and tests for prototype davits.

(a) If the manufacturer is notified that the information submitted in accordance with § 160.132–9 of this subpart is satisfactory to the Commandant, the manufacturer may

proceed with fabrication of the prototype davit, and the approval inspections and tests required under this section.

(b) Except as provided in paragraph (f) of this section, the Coast Guard must conduct the approval inspections and witness the approval tests required under this section.

(c) *Manufacturer requirements.* To proceed with approval inspections and tests required by this section, the manufacturer must—

(1) Notify the Commandant and cognizant Officer in Charge, Marine Inspection (OCMI) of where the approval inspections and tests required under this section will take place, and such notifications must be in sufficient time to allow making travel arrangements;

(2) Arrange a testing schedule with the cognizant OCMI that allows for a Coast Guard inspector to travel to the site where the testing is to be performed;

(3) Admit the Coast Guard inspector to any place where work or testing is performed on davits or their component parts and materials for the purpose of—

(i) Conducting inspections as necessary to determine that the prototype—

(A) Conforms with the plans reviewed under § 160.132–9 of this subpart;

(B) Is constructed by the methods and with the materials specified in the plans reviewed under § 160.132–9 of this subpart; and

(C) When welding is part of the construction process, is constructed by the welding procedure and materials as per the plans reviewed under § 160.132–9 of this subpart and the welders are appropriately qualified;

(ii) Assuring that the quality-assurance program of the manufacturer is satisfactory;

(iii) Witnessing tests; and

(iv) Taking samples of parts or materials for additional inspections or tests; and

(4) Make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of davits, together with records identifying the lot or serial numbers of the davits in which such materials were used.

(d) *Tests*—(1) *IMO Revised recommendation on testing.* Each prototype davit of each design must pass each of the tests described in IMO Revised recommendation on testing, Part 1, paragraph 8.1 (incorporated by reference, see § 160.132–5) applicable to the design and service of the davit.

(2) *Visual inspection.* Each davit must be visually inspected to confirm—

(i) Compliance with this subpart;

(ii) Conformance with the examined plans; and

(iii) Ease of operation and maintenance.

(3) *Hydraulic controls.* If the davit design includes a fluid power and control system, a test of the hydraulic controls must be conducted in accordance with 46 CFR 58.30–35.

(e) *Test waiver.* The Commandant may waive certain tests for a davit similar in construction to a davit that has successfully completed the tests.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness approval tests required by this section so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005–9(a)(5) by preparing and submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, see § 160.132–5). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as permitted by paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final version of the plans required under § 160.132–9 of this subpart in triplicate.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005–13.

§ 160.132–15 Production inspections, tests, quality control, and conformance of davits.

(a) Unless the Commandant directs otherwise, an independent laboratory must conduct or witness inspections, tests, and oversight required by this section. Production inspections and tests of davits 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 production tests and inspections necessary to maintain

quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer's responsibility.* The manufacturer must—

(1) Institute a quality control procedure to ensure that all production davits are produced to the same standard, and in the same manner, as the prototype davit approved by the Commandant. The manufacturer's quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section), to ensure that all tests are performed as described in this section;

(3) Submit to the Commandant a yearly report that contains the following—

(i) Serial number and date of final assembly of each davit constructed;

(ii) The name of the representative of the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section); and

(iii) Name of the vessel and company receiving the davit, if known;

(4) Ensure that the arrangement and materials entering into the construction of the davit are in accordance with plans approved under § 160.132–13(h) of this subpart;

(5) Allow an independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) access to any place where materials are stored for the davit, work or testing is performed on davits or their component parts and materials, or records are retained to meet the requirements of paragraph (c) of this section, below, for the purpose of—

(i) Assuring that the quality control program of the manufacturer is satisfactory;

(ii) Witnessing tests; or

(iii) Taking samples of parts or materials for additional inspections or tests; and

(6) Ensure that the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) conducts the inspections and witnesses the tests required by paragraph (e) of this section, and further conducts a visual inspection to verify that the davits are being made in accordance with the plans approved under § 160.132–13(h) of this subpart and the requirements of this subpart.

(c) *Recordkeeping.* The manufacturer must maintain records in accordance with 46 CFR 159.007–13. The manufacturer must keep records of all

items listed in this section for at least 5 years from the date of termination of approval of each davit. The records must include—

(1) A copy of this subpart, other CFR sections referenced in this subpart, and each document listed in § 160.132–5 of this subpart;

(2) A copy of the approved plans, documentation, and certifications;

(3) A current certificate of approval for each approved davit;

(4) Affidavits, certificates, or invoices from the suppliers identifying all essential materials used in the production of approved davits, together with records identifying the serial numbers of davits in which such materials were used;

(5) Records of all structural welding and name of operator(s);

(6) Records of welder certificates, training, and qualifications;

(7) Date and results of calibration of test equipment and the name and address of the company or agency that performed the calibration;

(8) The serial number of each production davit, along with records of its inspections and tests carried out under this section; and

(9) The original purchaser of each davit and the vessel on which it was installed, if known.

(d) *Independent laboratory responsibility.* The independent laboratory must perform or witness the inspections and tests under this section for each Coast Guard-approved davit to be installed on a U.S.-flagged vessel. If the manufacturer also produces davits for approval by other maritime safety administrations, the inspections may be coordinated with inspection visits for those administrations.

(e) *Production inspections and tests.* Each approved davit must be inspected and tested in accordance with the procedures in 46 CFR part 159, subpart 159.007 and the load test described in IMO Revised recommendation on testing, Part 2, paragraph 6.1.1 (incorporated by reference, see § 160.132–5).

§ 160.132–17 Marking and labeling.

(a) Each davit must be marked with a plate or label permanently affixed in a conspicuous place readily for inspection and sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the davit.

(b) The plate or label must be in English, but may also be in other languages.

(c) The plate or label must contain the—

(1) Name and address of the manufacturer;

(2) Manufacturer's model identification;

(3) Name of the independent laboratory that witnessed the prototype or production tests;

(4) Serial number of the davit;

(5) U.S. Coast Guard approval number;

(6) Month and year of manufacture;

(7) Safe working load of the davit; and

(8) Word "SOLAS".

§ 160.132–19 Operating instructions and information for the ship's training manual.

(a) Each davit must have instructions and information for the ship's training manual that use the symbols from IMO Res. A.760(18) (incorporated by reference, see § 160.132–5) to describe the location and operation of the davit.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their complete launching systems.

(c) The davit manufacturer must make operating instructions and information required by paragraph (a) of this section available in English to the purchaser of a davit approved by the Coast Guard.

§ 160.132–21 Operation and maintenance instructions.

(a) Each davit must have operation and maintenance instructions that—

(1) Follows the general format and content specified in IMO MSC.1 Circ. 1205 (incorporated by reference, see § 160.132–5); and

(2) Includes a checklist for use in monthly, external visual inspections of the davit.

(b) The davit manufacturer must make the manual required by paragraph (a) of this section available in English to the purchaser of a davit approved by the Coast Guard.

(c) The operation and maintenance instructions required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their complete launching systems.

§ 160.132–23 Procedure for approval of design or material change.

(a) Each change in design, material, or construction from the plans approved under 46 CFR 159.005–13 and § 160.132–13(h) of this subpart must be approved by the Commandant before being used in any production davit. The manufacturer must submit any such change following the procedures in § 160.132–9 of this subpart, but documentation on items that are unchanged from the plans approved under 46 CFR 159.005–13 and § 160.115–13(h) of this subpart need not be resubmitted.

(b) Unless determined by the Commandant to be unnecessary, a prototype davit with each change described in paragraph (a) of this section must be made and tested according to the procedures for new approvals in §§ 160.132–9 through 160.132–13 of this subpart.

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

27. Add subpart 160.133 to read as follows:

Subpart 160.133—Release Mechanisms for Lifeboats and Rescue Boats (SOLAS)

Sec.

160.133–1 Scope.

160.133–3 Definitions.

160.133–5 Incorporation by reference.

160.133–7 Design, construction, and performance of release mechanisms.

160.133–9 Preapproval review.

160.133–11 [Reserved]

160.133–13 Approval inspections and tests for prototype release mechanisms.

160.133–15 Production inspections, tests, quality control, and conformance of release mechanisms.

160.133–17 Marking and labeling.

160.133–19 Operating instructions and information for the ship's training manual.

160.133–21 Operation and maintenance instructions.

160.133–23 Procedure for approval of design or material change.

Subpart 160.133—Release Mechanisms for Lifeboats and Rescue Boats (SOLAS)

§ 160.133–1 Scope.

This subpart prescribes standards, tests, and procedures for seeking Coast Guard approval of a release mechanism used for davit-launched and free-fall lifeboats approved under 46 CFR part 160, subpart 160.135, and rescue boats approved under 46 CFR part 160, subpart 160.156.

§ 160.133–3 Definitions.

In addition to the definitions in the IMO LSA Code (incorporated by reference, see § 160.133–5), in this subpart, the term:

Commandant means the Commandant (CG–5214), U.S. Coast Guard, 2100 2nd St SW., Stop 7126, Washington, DC 20593–7126.

Full load means the weight of the complete lifeboat or rescue boat including all required equipment, provisions, fuel, and the number of persons for which it is approved. This is also known as the "condition B" weight.

Independent laboratory has the same meaning as 46 CFR 159.001–3. A list of accepted independent laboratories is

available from the Commandant and online at <http://cgmix.uscg.mil>.

Light load means the weight of the complete lifeboat or rescue boat empty and does not include fuel, required equipment, or the equivalent weight of persons. This is also known as the "condition A" weight.

Officer In Charge, Marine Inspection (OCMI) means an officer of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in part 1 of this chapter, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The "cognizant OCMI" is the OCMI who has immediate jurisdiction over a vessel for the purpose of performing the duties previously described.

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.

§ 160.133-5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, it is available for inspection at Commandant (CG-5214), U.S. Coast Guard, 2100 2nd St, SW., Stop 7126, Washington, DC 20593-7126 and is available from the sources indicated in this section.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

(1) ASTM A 36/A 36M-08 Standard Specification for Carbon Structural Steel, IBR approved for § 160.133-7 ("ASTM A 36").

(2) ASTM A 653/A 653M-08 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, IBR approved for §§ 160.133-7, 160.133-13, and 160.133-15. ("ASTM A 653").

(3) ASTM F 1166-07 Standard Practice for Human Engineering Design

for Marine Systems, Equipment, and Facilities, IBR approved for § 160.133-7 ("ASTM F 1166").

(c) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London, SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution A.760(18), Symbols Related to Life-Saving Appliances and Arrangements, IBR approved for § 160.133-19 ("IMO Res. A.760(18)").

(2) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for §§ 160.133-7 and 160.133-13 ("IMO Revised recommendation on testing").

(3) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for § 160.133-7 ("IMO LSA Code").

(4) MSC Circular 980, Standardized life-saving appliance evaluation and test report forms, IBR approved for § 160.133-13 ("IMO MSC Circ. 980").

(5) MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems, IBR approved for § 160.133-21 ("IMO MSC.1 Circ. 1205").

§ 160.133-7 Design, construction, and performance of release mechanisms.

(a) To seek Coast Guard approval of a release mechanism, a manufacturer must comply with, and each release mechanism must meet, the requirements of the following—

(1) IMO LSA Code, Chapter IV/4.4.7.6 (incorporated by reference, see § 160.133-5), and a release mechanism for free-fall lifeboats must also meet the applicable provisions of Chapter VI/6.1.4;

(2) IMO Revised recommendation on testing, Part 1/6.9 (incorporated by reference, see § 160.133-5);

(3) 46 CFR part 159; and

(4) This subpart.

(b) Each release mechanism must meet the following requirements—

(1) *Design*. All functions of the release mechanism, including removal of interlocks, operation of the release handle, resetting the hooks, and reattaching the falls to the hooks, must be designed to be operable by persons wearing immersion suits;

(2) Each release mechanism should be designed following standard human engineering practices described in ASTM F 1166 (incorporated by reference, see § 160.133-5). Design limits should be based on a range from

the fifth percentile female to the ninety-fifth percentile male values for critical body dimensions and functional capabilities as described in ASTM F 1166. The dimensions for a person wearing an immersion suit correspond to the arctic clothed dimensions of ASTM F 1166;

(3) *Steel*. Each major structural component of each release mechanism must be constructed of steel. Other materials may be used if accepted by the Commandant as equivalent or superior. Sheet steel and plate must be low-carbon, commercial quality, either corrosion resistant or galvanized as per ASTM A 653 (incorporated by reference, see § 160.133-5), coating designation G115. Structural steel plates and shapes must be carbon steel as per ASTM A 36 (incorporated by reference, see § 160.133-5). All steel products, except corrosion resistant steel, must be galvanized to provide high-quality zinc coatings suitable for the intended service life in a marine environment. Each fabricated part must be galvanized after fabrication. Corrosion resistant steel must be a standard 302 stainless steel or have equal or superior corrosion resistant characteristics.

(4) *Welding*. Welding must be performed by welders certified by the Commandant, American Bureau of Shipping, U.S. Navy, or an independent laboratory accepted by the Commandant. Only electrodes intended for use with the material being welded may be used. All welds must be checked using appropriate non-destructive tests.

(5) Metals in contact with each other must be either galvanically compatible or insulated with suitable non-porous materials. Provisions must also be made to prevent loosening or tightening resulting from differences of thermal expansion, freezing, buckling of parts, galvanic corrosion, or other incompatibilities;

(6) Screws, nuts, bolts, pins, keys, and other similar hardware, securing moving parts must be fitted with suitable lock washers, cotter pins, or locks to prevent them from coming adrift;

(7) The on-load operation of the release mechanism must require two separate, deliberate actions by the operator;

(8) The mechanical protection required by LSA Code Chapter IV/4.4.7.6.2.2 must only be able to be engaged when the release mechanism is properly and completely reset. Proper engagement of the mechanical protection must be visually indicated;

(9) The release and recovery procedures required by LSA Code Chapter IV/4.4.7.6.5 must be included as an illustrated operation instruction

plate or placard. The plate or placard must be corrosion resistant and weatherproof and must be marked with the word "DANGER". The illustrations must correspond exactly to those used in the instruction and maintenance manual provided by the manufacturer;

(10) The release lever or control must be red in color, and the area immediately surrounding the control must be a sharply contrasting light color;

(11) The release lever and its connection to the release mechanism must be of sufficient strength so that there is no deformation of the release lever or the release control assembly during on-load release;

(12) Positive means of lubrication must be provided for each bearing which is not permanently lubricated. Points of lubrication must be so located that they are clearly visible and accessible in the installed position in the boat;

(13) A hydraulic system, if used to activate the release mechanism, must be in accordance with 46 CFR part 58, subpart 58.30, with hose and fittings in accordance with 46 CFR part 56, subpart 56.60, except that—

(i) Push-on type fittings such as Aeroquip 1525-X, 25156-X, and FC332-X are not permitted;

(ii) The length of nonmetallic flexible hose is limited to 760 mm (30 in); and

(iii) If a hand pump is provided, adequate space must be provided for the hand pump or hand operation;

(14) Each release mechanism designed to launch a boat by free-fall must not be able to carry any weight until the release mechanism is properly reset, and each of the two independent activation systems required to be operated from inside the boat must require at least two independent actions from different locations inside the boat to release the hook; and

(15) Each release mechanism must have mechanical protection against accidental or premature release that can only be engaged when the release mechanism is properly and completely reset. Proper engagement of the mechanical protection must be visually indicated.

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

§ 160.133-9 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 release

mechanism, 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) Stress calculations for all load carrying parts, including the release hooks, release mechanisms, and connections;

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

(5) Drawings of all signs and placards showing actual inscription, format, color, and size;

(6) An operation, maintenance, and training manual as described in §§ 160.133-19 and 160.133-21 of this subpart;

(7) A description of the quality control procedures and recordkeeping that will apply to the production of the release mechanism, 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 and joints, including welding inspection procedures; and

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

(8) Full details of any other unique capability;

(9) Any other drawing(s) necessary to show that the release mechanism complies with the requirements of this subpart;

(10) The location or address of all manufacturing sites, including the name and address of any subcontractors, where the release mechanism will be constructed; and

(11) The name of the independent laboratory that will perform the duties prescribed in § 160.133-15 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 release mechanism meets the construction requirements of this subpart;

(3) Accurately depict the proposed release mechanism;

(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.

§ 160.133-11 [Reserved]

§ 160.133-13 Approval inspections and tests for prototype release mechanisms.

(a) If the manufacturer is notified that the information submitted in accordance with § 160.133-9 of this subpart is satisfactory to the Commandant, the manufacturer may proceed with fabrication of the prototype release mechanism, and the approval inspections and tests required under this section.

(b) Except as provided in paragraph (f) of this section, the Coast Guard must conduct the approval inspections and witness the approval tests required under this section.

(c) *Manufacturer requirements.* To proceed with approval inspections and tests required by this section, the manufacturer must—

(1) Notify the Commandant and cognizant Officer in Charge, Marine Inspection (OCMI) of where the approval inspections and tests required under this section will take place, and such notification must be in sufficient time to allow making travel arrangements;

(2) Arrange a testing schedule that allows for a Coast Guard inspector to travel to the site where the testing is to be performed;

(3) Admit the Coast Guard inspector to any place where work or testing is performed on release mechanisms or their component parts and materials for the purpose of—

(i) Conducting inspections as necessary to determine that the prototype—

(A) Conforms with the plans reviewed under § 160.133–9 of this subpart;

(B) Is constructed by the methods and with the materials specified in the plans reviewed under § 160.133–9 of this subpart; and

(C) When welding is part of the construction process, is constructed by the welding procedure and materials as per the plans reviewed under § 160.133–9 of this subpart and the welders are appropriately qualified;

(ii) Assuring that the quality-assurance program of the manufacturer is satisfactory;

(iii) Witnessing tests; and

(iv) Taking samples of parts or materials for additional inspections or tests; and

(4) Make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of release mechanisms, together with records identifying the lot or serial numbers of the release mechanisms in which such materials were used.

(d) *Tests*—(1) *Prototype release mechanism readiness*. All tests must be conducted on a complete release mechanism.

(2) *IMO Revised recommendation on testing*. Each prototype release mechanism of each design must pass each of the tests described in IMO Revised recommendation on testing, Part 1, paragraph 6.9 (incorporated by reference, *see* § 160.133–5) applicable to davit-launched or free-fall lifeboats. Tests must be conducted in accordance with these paragraphs of IMO Revised recommendation on testing, Part 1, with the following modifications—

(i) *Visual inspection*. Each release mechanism must be visually inspected to confirm—

(A) Compliance with this subpart;

(B) Conformance with the examined plans; and

(C) Ease of operation and maintenance;

(ii) *Operation*. Operation of the off-load control, for a davit-launched boat, must be tested to confirm that the release lever cannot be shifted to release the boat in either the full load or light load condition. For a free-fall boat, the operation of the hook release must be demonstrated using both activation systems and may be tested without launching the boat;

(iii) *Materials*. Steel meeting ASTM A 653 (incorporated by reference, *see* § 160.133–5) must meet the coating mass and bend tests requirement specified under ASTM A 653 after galvanizing or other anti-corrosion treatment has been applied. This compliance can be ascertained through a supplier's certification or by conducting actual tests;

(iv) *Tensile tests*. The release mechanism hook assembly and supporting structure must be tensile tested in a jig built to load the hook assembly in the same way it would be loaded when installed in a boat. The hook assembly will be approved for a maximum of one-sixth of the highest load applied without failure;

(v) *Universal joints*. This test is required if the release mechanism employs universal joints to transmit the release power from the control to the hook release. One of each type and size of universal joint must be set up in a jig with the angles of leads set at 0 (zero), 30, and 60 degrees, respectively. A torque of 540 Nm (400 ft lb) must be applied. This torque must be applied with the connecting rod secured beyond the universal and with the lever arm in the horizontal position. There must be no permanent set, or undue stress, as a result of this test; and

(vi) *Hydraulic controls*. If the release mechanism includes a fluid power and control system, a test of the hydraulic controls must be conducted in accordance with 46 CFR 58.30–35.

(e) *Test waiver*. The Commandant may waive certain tests for a release mechanism identical in construction to smaller and larger release mechanisms that have successfully completed the tests. However, stress calculations in accordance with § 160.133–9(b)(3) of this subpart must still be submitted. Tests associated with release mechanism components that have already been accepted by the Commandant are not required to be repeated.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness approval tests required by this section so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005–9(a)(5) by preparing and

submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, *see* § 160.133–5). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as permitted under paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final plans of the release mechanism as built, in triplicate. The plans must include the instructions for training and maintenance described in §§ 160.133–19 and 160.133–21 of this subpart, respectively.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005–13.

§ 160.133–15 Production inspections, tests, quality control, and conformance of release mechanisms.

(a) Unless the Commandant directs otherwise, an independent laboratory must conduct or witness inspections, tests, and oversight required by this section. Production inspections and tests of release mechanisms 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 production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer's responsibility*. The manufacturer must—

(1) Institute a quality control procedure to ensure that all production release mechanisms are produced to the same standard, and in the same manner, as the prototype release mechanism approved by the Commandant. The manufacturer's quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) to ensure that all tests are performed as described in this section;

(3) Submit to the Commandant, a yearly report that contains the following—

(i) Serial number and date of final assembly of each release mechanism constructed;

(ii) The name of the representative of the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section); and

(iii) Serial number and model of the lifeboat or rescue boat in which the release mechanism is installed, if known;

(4) Ensure that the arrangement and materials entering into the construction of the release mechanism are in accordance with plans approved under § 160.133–13(h) of this subpart;

(5) Allow an independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) access to any place where materials are stored for the release mechanism, work or testing is performed on release mechanism or their component parts and materials, or records are retained to meet the requirements of paragraph (c) of this section, for the purpose of—

(i) Assuring that the quality control program of the manufacturer is satisfactory;

(ii) Witnessing tests; or

(iii) Taking samples of parts or materials for additional inspections or tests; and

(6) Ensure that the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) conducts the inspections and witnesses the tests required by paragraph (e) of this section, and further conducts a visual inspection to verify that the release mechanisms are being made in accordance with the approved plans approved under § 160.133–13(h) of this subpart and the requirements of this subpart.

(c) *Recordkeeping.* The manufacturer must maintain records in accordance with 46 CFR 159.007–13. The manufacturer must keep records of all items listed in this section for at least 5 years from the date of termination of approval of each release mechanism. The records must include—

(1) A copy of this subpart, other CFR sections referenced in this subpart, and each document listed in § 160.133–5 of this subpart;

(2) A copy of the approved plans, documentation, and certifications;

(3) A current certificate of approval for each approved release mechanism;

(4) Affidavits, certificates, or invoices from the suppliers identifying all essential materials used in the production of approved release mechanisms, together with records identifying the serial numbers of the release mechanisms in which such materials were used;

(5) Records of all structural welding and name of operator(s);

(6) Records of welder certificates, training, and qualifications;

(7) Date and results of calibration of test equipment and the name and address of the company or agency that performed the calibration;

(8) The serial number of each production release mechanism, along with records of its inspections and tests carried out under this section; and

(9) The original purchaser of each release mechanism and the vessel on which it was installed, if known.

(d) *Independent laboratory responsibility.* The independent laboratory must perform or witness the inspections and tests under paragraph (e) of this section for each Coast Guard-approved release mechanism to be installed on a U.S.-flagged vessel. If the manufacturer also produces release mechanisms for approval by other maritime safety administrations, the inspections may be coordinated with inspection visits for those administrations.

(e) *Production inspections and tests.* Each finished release mechanism must be visually inspected. The manufacturer must develop and maintain a visual inspection checklist designed to ensure that all applicable requirements have been met. Each approved release mechanism constructed with non-corrosion resistant steel must be confirmed to have met the coating mass and bend tests requirement specified under ASTM A 653 (incorporated by reference, see § 160.133–5) after galvanizing or other anti-corrosion treatment has been applied. This compliance can be ascertained through a supplier's certification papers or through conducting actual tests.

§ 160.133–17 Marking and labeling.

(a) Each hook body of a release mechanism must be marked with a plate or label permanently affixed in a conspicuous place readily accessible for inspection and sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the release mechanism.

(b) The plate or label must be in English, but may also be in other languages.

(c) The plate or label must contain the—

(1) Manufacturer's name and model identification;

(2) Name of the independent laboratory that witnessed the prototype or production tests;

(3) Serial number of the release mechanism;

(4) U.S. Coast Guard approval number;

(5) Month and year of manufacture;

(6) Safe working load of the release mechanism; and

(7) The word "SOLAS."

§ 160.133–19 Operating instructions and information for the ship's training manual.

(a) Each release mechanism must have instructions and information for the ship's training manual that use the symbols from IMO Res. A.760(18) (incorporated by reference, see § 160.133–5) to describe the location and operation of the release mechanism.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

(c) The release mechanism manufacturer must make the instructions and information required by paragraph (a) of this section available—

(1) In English to purchasers of release mechanisms approved by the Coast Guard; and

(2) In the form of an instruction placard providing simple procedures and illustrations for operation of the release mechanism. The placard must be not greater than 36 cm (14 in) by 51 cm (20 in), and must be made of durable material and suitable for display inside a lifeboat and rescue boat and/or near launching appliances on vessels.

§ 160.133–21 Operation and maintenance instructions.

(a) Each release mechanism must have operation and maintenance instructions that—

(1) Follows the general format and content specified in IMO MSC.1 Circ. 1205 (incorporated by reference, see § 160.133–5); and

(2) Includes a checklist for use in monthly, external visual inspections of the release mechanism.

(b) The release mechanism manufacturer must make the manual required by paragraph (a) of this section available in English to purchasers of a release mechanism approved by the Coast Guard.

(c) The operation and maintenance instructions required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

§ 160.133–23 Procedure for approval of design, material, or construction change.

(a) Each change in design, material, or construction from the plans approved under 46 CFR 159.005–13 and § 160.133–13(h) of this subpart must be approved by the Commandant before being used in any production release

mechanism. The manufacturer must submit any such change following the procedures set forth in § 160.133-9 of this subpart, but documentation on items that are unchanged from the plans approved under 46 CFR 159.005-13 and § 160.133-13(h) of this subpart need not be resubmitted.

(b) Unless determined by the Commandant to be unnecessary, a prototype release mechanism with each change described in paragraph (a) of this section must be made and tested according to the procedures for new approvals in §§ 160.133-9 through 160.133-13 of this subpart.

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

28. Add subpart 160.135 to read as follows:

Subpart 160.135—Lifeboats (SOLAS)

Sec.

- 160.135-1 Scope.
- 160.135-3 Definitions.
- 160.135-5 Incorporation by reference.
- 160.135-7 Design, construction, and performance of lifeboats.
- 160.135-9 Preapproval review.
- 160.135-11 Fabrication of prototype lifeboats for approval.
- 160.135-13 Approval inspections and tests for prototype lifeboats.
- 160.135-15 Production inspections, tests, quality control, and conformance of lifeboats.
- 160.135-17 Marking and labeling.
- 160.135-19 Operating instructions and information for the ship's training manual.
- 160.135-21 Operation and maintenance instructions.
- 160.135-23 Procedure for approval of design or material change.

Subpart 160.135—Lifeboats (SOLAS)

§ 160.135-1 Scope.

This subpart prescribes standards, tests, and procedures for seeking Coast Guard approval of a lifeboat.

§ 160.135-3 Definitions.

In addition to the definitions in the IMO LSA Code (incorporated by reference, see § 160.135-5), in this subpart, the term:

Commandant means the Commandant (CG-5214), U.S. COAST GUARD, 2100 2ND ST. SW., STOP 7126, WASHINGTON, DC 20593-7126.

Fiberglass Reinforced Plastic (FRP) is a composite structural material formed by electrical-grade glass fibers in Coast Guard accepted catalyst activated resin.

Full load means the weight of the complete lifeboat including all required equipment, provisions, fuel, and the number of persons for which it is approved. This is also known as the "condition B" weight.

Independent laboratory has the same meaning as 46 CFR 159.001-3. A list of accepted independent laboratories is available from the Commandant and online at <http://cgmix.uscg.mil>.

Light load means the weight of the complete lifeboat empty and does not include fuel, required equipment, or the equivalent weight of persons. This is also known as the "condition A" weight.

Officer In Charge, Marine Inspection (OCMI) means an officer of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in part 1 of this chapter, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The "cognizant OCMI" is the OCMI who has immediate jurisdiction over a vessel for the purpose of performing the duties previously described.

Positive Stability is the condition of a lifeboat such that when it is displaced a small amount in any direction from upright, it returns on its own to the position before displacement.

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.

§ 160.135-5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, it is available for inspection at COMMANDANT (CG-5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593-7126 and is available from the sources indicated in this section.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959.

(1) ASTM A 36/A 36M-08 Standard Specification for Carbon Structural Steel, IBR approved for §§ 160.135-7 and 160.135-15 ("ASTM A 36").

(2) ASTM A 653/A 653M-08 Standard Specification for Steel Sheet, Zinc-

Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, IBR approved for §§ 160.135-7, 160.135-11, and 160.135-15 ("ASTM A 653").

(3) ASTM B 127-05(2009) Standard Specification for Nickel-Copper Alloy (UNS N04400) Plate, Sheet, and Strip, IBR approved for § 160.135-7 ("ASTM B 127").

(4) ASTM B 209-07 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate, IBR approved for § 160.135-7 ("ASTM B 209").

(5) ASTM D 638-08 Standard Test Method for Tensile Properties of Plastics, IBR approved for § 160.135-11 ("ASTM D 638").

(6) ASTM D 790-07e1 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials, IBR approved for § 160.135-11 ("ASTM D 970").

(7) ASTM D 2584-08 Standard Test Method of Ignition Loss for Cured Reinforced Resins, IBR approved for §§ 160.135-11 and 160.135-15 ("ASTM D 2584").

(8) ASTM D 4029-09 Standard Specification for Finished Woven Glass Fabrics, IBR approved for § 160.135-7 ("ASTM D 4029").

(9) ASTM F 1166-07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities, IBR approved for §§ 160.135-7 and 160.135-13 ("ASTM F 1166").

(c) General Services Administration, Federal Acquisition Service, Office of the FAS Commissioner, 22200 Crystal Drive, 11th Floor, Arlington, VA 22202, 703-605-5400.

(1) Federal Standard 595C—Colors Used in Government Procurement, IBR approved for § 160.135-7 ("FED-STD-595C").

(2) [Reserved]

(d) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution A.658(16), Use and Fitting of Retro-reflective Materials on Life-saving Appliances, IBR approved for § 160.135-7 ("IMO Res. 658(16)").

(2) IMO Resolution A.760(18), Symbols Related to Life-Saving Appliances and Arrangements, IBR approved for §§ 160.135-7 and 160.135-19 ("IMO Res. A.760(18)").

(3) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for

§§ 160.135–7 and 160.135–13 (“IMO Revised recommendation on testing”).

(4) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for §§ 160.135–7 and 160.135–13 (“IMO LSA Code”).

(5) MSC Circular 980, Standardized life-saving appliance evaluation and test report forms, IBR approved for §§ 160.135–7 and 160.135–13 (“IMO MSC Circ. 980”).

(6) MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems, IBR approved for § 160.135–21 (“IMO MSC.1 Circ. 1205”).

(e) International Organization for Standardization (ISO): ISO Central Secretariat [ISO Copyright Office], Case Postale 56, CH–1211 Geneve 20, Switzerland.

(1) ISO 14125:1998 Fibre-reinforced plastic composites—Determination of flexural properties, IBR approved for § 160.135–11 (“ISO 14125”).

(2) ISO 527–1:1993 Plastics—Determination of tensile properties, IBR approved for § 160.135–11 (“ISO 527”).

(3) ISO 1172:1996 Textile-glass-reinforced plastics—Prepregs, moulding compounds and laminates—Determination of the textile-glass and mineral-filler content—Calcination methods, IBR approved for §§ 160.135–11 and 160.135–15 (“ISO 1172”).

(f) Military Specifications and Standards, Standardization Order Desk, Building 4D, 700 Robins Avenue, Philadelphia, PA 19111–5094, <https://assist.daps.dla.mil/quicksearch/>.

(1) A–A–55308 Cloth And Strip, Laminated Or Coated, Vinyl Nylon Or Polyester, High Strength, Flexible, IBR approved for § 160.135–7 (“A–A–55308”).

(2) MIL–C–19663D: Cloth, Woven Roving, For Plastic Laminate, 4 AUG 1998, IBR approved for § 160.135–7 (“MIL–C–19663D”).

(3) MIL–P–17549D(SH): Plastic Laminates, Fibrous Glass Reinforced, Marine, 31 AUG 1981, IBR approved for § 160.135–7 (“MIL–P–17549D(SH)”).

§ 160.135–7 Design, construction, and performance of lifeboats.

(a) To seek Coast Guard approval of a lifeboat, a manufacturer must comply with, and each lifeboat must meet, the requirements of the following—

(1) IMO LSA Code, Chapter IV (incorporated by reference, see § 160.135–5) applicable to the type of lifeboat;

(2) IMO Revised recommendation on testing, Part 1/6 (incorporated by

reference, see § 160.135–5) applicable to the type of lifeboat;

(3) 46 CFR part 159; and

(4) This subpart.

(b) Each lifeboat must meet the following requirements:

(1) *Design.* (i) Each lifeboat, other than a totally enclosed lifeboat, must be designed to be operable by persons wearing immersion suits.

(ii) Each lifeboat should be designed following standard human engineering practices described in ASTM F 1166 (incorporated by reference, see § 160.135–5). Design limits should be based on a range from the fifth percentile female to the ninety-fifth percentile male values for critical body dimensions and functional capabilities as described in ASTM F 1166. The dimensions for a person wearing an immersion suit correspond to the arctic clothed dimensions of ASTM F 1166.

(2) *Visibility from operator’s station.*

(i) The operator’s station must be designed such that the operator, when seated at the control station, has visibility 360 degrees around the lifeboat, with any areas obstructed by the lifeboat structure or its fittings visible by moving the operator’s head and torso.

(ii) The operator, while still being able to steer and control the speed of the lifeboat, must be able to see the water—

(A) Over a 90 degree arc within 3 m (9 ft, 10 in) of each side of the lifeboat;

(B) Over a 30 degree arc within 1 m (3 ft, 3 in) of each side of the lifeboat; and

(C) Within 0.5 m (1 ft, 8 in) of the entrances designated for recovering persons from the water.

(iii) In order to see a person in the water during recovery or docking operations, a hatch must be provided so that the operator can stand with his or her head outside the lifeboat for increased visibility, provided the operator can still steer and control the speed of the lifeboat.

(3) *Construction.* Each major rigid structural component of each lifeboat must be constructed of steel, aluminum, Fiber Reinforced Plastic (FRP), or materials accepted by the Commandant as equivalent or superior.

(i) *General.* Metals in contact with each other must be either galvanically compatible or insulated with suitable non-porous materials. Provisions must also be made to prevent loosening or tightening resulting from differences of thermal expansion, freezing, buckling of parts, galvanic corrosion, or other incompatibilities.

(ii) *Steel.* Sheet steel and plate must be low carbon, commercial quality, either corrosion resistant or galvanized

as per ASTM A 653, coating designation G90 (incorporated by reference, see § 160.135–5). Structural steel plates and shapes must be carbon steel as per ASTM A 36 (incorporated by reference, see § 160.135–5), or an equivalent or superior steel accepted by the Commandant. All steel products, except corrosion resistant steel, must be galvanized to provide high quality zinc coatings suitable for the intended service life in a marine environment. Corrosion resistant steel must be a standard 302 stainless steel or have equal or superior corrosion resistant characteristics.

(iii) *Aluminum.* Aluminum and aluminum alloys must conform to ASTM B 209 (incorporated by reference, see § 160.135–5) and be high purity for good marine corrosion resistance, free of iron, and containing not more than 0.6 percent copper.

(iv) *Fiber Reinforced Plastic.*

(A) *Resin.* Any resin used for the hull, canopy, hatches, rigid covers, and enclosures for the engine, transmission, and engine accessories, must be fire retardant and accepted by the Commandant in accordance with 46 CFR part 164, subpart 164.017.

(B) *Glass reinforcement.* Any glass reinforcement used must have good laminated wet strength retention and must meet the appropriate specification in this paragraph. Glass cloth must be a finished fabric woven from “E” electrical glass fiber yarns meeting ASTM D 4029–09 commercial style designation 1564 (incorporated by reference, see § 160.135–5). Woven roving must conform to MIL–C–19663D (incorporated by reference, see § 160.135–5). Other glass materials equivalent or superior in strength, design, wet out, and efficiency will be given consideration on specific request to the Commandant.

(C) *Laminate.* All exposed surfaces of any finished laminate must present a smooth finish, and there must be no protruding surface fibers, open voids, pits, cracks, bubbles, or blisters. The laminate must be essentially free from resin-starved or overimpregnated areas, and no foreign matter must remain in the finished laminate. The entire laminate must be fully cured and free of tackiness, and must show no tendency to delaminate, peel, or craze in any overlay. The laminate must not be released from the mold until a Barcol hardness reading of not less than 40–55 is obtained from at least 10 places on the non-gel coated surface, including all interior inner and outer hull surfaces and built-in lockers. The mechanical properties of the laminate must meet the requirements for a Grade 3 laminate as

specified in Table I of MIL-P-17549D(SH) (incorporated by reference, see § 160.135-5). Other grades will be given consideration on specific request to the Commandant.

(4) *Welding.* Welding must be performed by welders certified by the Commandant, American Bureau of Shipping, U.S. Navy, or an independent laboratory accepted by the Commandant. Only electrodes intended for use with the material being welded may be used. All welds must be checked using appropriate non-destructive tests.

(5) *Lifeboat buoyancy.* (i) The buoyancy material must be accepted by the Commandant as meeting the performance requirements of the IMO Revised recommendation on testing, Part 1, 6.2.2 to 6.2.7, with a density of $32 \pm 8 \text{ kg/m}^3$ ($2 \pm 0.5 \text{ lb/ft}^3$). The buoyancy foam or lifeboat manufacturer must certify the results of the testing to IMO Revised recommendation on testing, Part 1, 6.2.2 to 6.2.7 and submit those results to the Commandant. A list of accepted buoyancy foams may be obtained from the Commandant upon request and online at <http://cgmix.uscg.mil>.

(ii) All voids in the hull and canopy required to provide buoyancy for positive stability and self righting must be completely filled with Coast Guard accepted buoyancy material.

(6) *Engines.* (i) In order to be accepted by the Commandant, any compression ignition engine fitted to an approved lifeboat must meet the U.S. Environmental Protection Agency emission requirements in 40 CFR part 89, part 94, or part 1042, as applicable, and have reports containing the same information as recommended by MSC Circ. 980 (incorporated by reference, see § 160.135-5) certified and witnessed by a U.S. Coast Guard inspector or an independent laboratory.

(ii) A hydraulic system, if used to start the engine, must be in accordance with 46 CFR part 58, subpart 58.30, with hose and fittings in accordance with 46 CFR part 56, subpart 56.60, except that—

(A) Push-on type fittings such as Aeroquip 1525-X, 25156-X, and FC332-X are not permitted; and

(B) The length of nonmetallic flexible hose is limited to 760 mm (30 in). Longer, nonmetallic flexible hoses may be allowed in emergency steering systems at the discretion of the Commandant.

(iii) If a hand pump is provided, or if the engine has a manual starting system, adequate space must be provided for the hand pump or hand start operation.

(7) *Fuel system.* (i) The fuel system must meet 46 CFR 56.50-75(b) and, except as specified in this paragraph,

the fuel tank must meet 46 CFR 58.50-10.

(ii) Tanks constructed with—
(A) *Aluminum* must be at least 5 mm (0.20 in) thick of ASTM B 209 or 5086 alloy;

(B) *Nickel-copper* must be at least 0.9 mm (0.0375 in) thick of ASTM B 127 hot-rolled sheet or plate;

(C) *Steel or iron* must be at least 1.9 mm (0.0747 in) thick. Diesel tanks of steel or iron must not have interior galvanizing;

(D) *Fiberglass reinforced plastic* must be at least 5 mm (0.187 in) thick; be sealed against porosity by at least one ply of chopped strand mat; be reinforced in the way of tank openings; be fitted with corrosion-resistant fittings; have each joint at the top of the tank; and have each joint bonded and through-bolted; or

(E) *Roto-molded plastic* must be at least 5 mm thick; must meet the requirements of 33 CFR 183.510 (a), (b), and (e) regardless of tank capacity; must be able to pass all static pressure tests as required in 33 CFR 183.510 at a minimum pressure of 5 psi; and be fitted with corrosion-resistant fittings.

(iii) Each fuel tank over 0.75 m (30 in) long must be baffled at intervals not exceeding 0.45 m (18 in).

(iv) A fuel level indicator must be provided for each fuel tank.

(v) Any fuel tank vent piping must be at least 6 mm (0.25 in) outside diameter tubing.

(vi) A shut-off valve must be provided at the fuel tank and must not be provided at the fuel pump. The valve must be clearly labeled. The position of the valve must be clearly indicated by a permanent marking inside the lifeboat. The marking must be an arrow pointing in the direction of the valve, and the words "FUEL SHUT-OFF VALVE" must be in a color that contrasts with their background. The marking must be legible to a person within the vicinity of the engine.

(8) *Starting system batteries.* Any battery fitted in a totally enclosed lifeboat must be stored in a sealed compartment with exterior venting. If the lifeboat has more than one engine, then only one starting battery is required per engine.

(9) *Exhaust.* Engine exhaust must be routed away from bilge and potential oil drips. Any paint used on engines, manifolds, or exhaust must not give off fumes when heated. All exhaust lagging must be non-absorbent.

(10) *Propeller guard.* Each propeller on a lifeboat must be fitted with a propeller guard with a maximum opening of 76 mm (3 in) on all sides on which a person is likely to be exposed.

(11) *Control and steering station.* The operator's control and steering station must have complete lifeboat lowering and launching, hook release, engine throttle, steering controls, and if applicable, an air system and water spray system.

(i) The throttle must be a continuous manual control and must be able to be set and locked at any position.

(ii) The control and steering station must be designed and laid out in accordance with ASTM F 1166 sections 9 and 10, so that controls and displays are unambiguous, accessible, and easy to reach and use from the operator's normal seated position, while wearing an immersion suit or a lifejacket.

(iii) Each control, gauge, or display must be identified by a marking posted on, above, or adjacent to the respective item. Each control must operate in a logical manner and be marked with an arrow to show direction of movement of control which will cause an increased response. Each gauge must be marked with the normal operating range and indicate danger or abnormal conditions. Each marking must be permanent and weatherproof.

(iv) Gauges, and audio and visual alarms must be provided to monitor at least the following parameters—

(A) Coolant temperature, for a liquid cooled engine;

(B) Oil pressure, for an engine with an oil pump;

(C) Tachometer, for an engine not provided with over-speed protection; and

(D) State of charge, or rate of charge, for each rechargeable engine starting power source.

(12) *Drain plug.* The position of each drain plug must be clearly indicated by a permanent marking inside the lifeboat. The marking must be an arrow pointing in the direction of the plug, and the words "DRAIN PLUG" must be 76 mm (3 in) high and have letters of a color that contrast with their background. The marking must be clearly visible to a person within the vicinity of the drain plug.

(13) *Remote steering.* The procedure to change over from remote to local steering must be simple, not require the use of tools, and be clearly posted. There must be sufficient clear space to install, operate, remove, and stow the removable tiller arm. The tiller arm and its connection to the rudder stock must be of sufficient strength so that there is no slippage or bending of the tiller arm. Rudder stops or other means must be provided to prevent the rudder from turning too far on either side.

(14) *Lifelines.* Buoyant lifelines must be of ultraviolet resistant material.

(15) *Rails provided as handholds.* Rails provided as handholds to cling when the lifeboat is overturned must extend for half the length of the lifeboat on both sides of the hull, and the clearance between the rail and hull must also be at least 38 mm (1.5 in). The rails must be attached to the hull below the chine or turn of the bilge, must be faired to prevent any fouling, and not project beyond the widest part of the lifeboat.

(16) *Storage compartments and collection and storage of rainwater.* (i) Each storage compartment must be supported and secured against movement. It must have adequate hand access for removing and storing the required equipment, provisions, or water, and for cleaning the inside of the compartment.

(ii) The rain water collecting device may be incorporated into the design of the canopy or may be a separate unit to be mounted outside the lifeboat. The device must have a projected horizontal area of at least 1 m² (10.7 ft²) collection area and be designed to function unattended.

(iii) Provision must be made to continue to collect water in the storage compartment while drawing water to fill a cup. The compartment must have a means of drainage and adequate access to allow filling the graduated drinking cup required to be carried as part of the lifeboat equipment.

(17) *Release mechanism.* Each release mechanism must be identified at the application for approval of the prototype lifeboat and must be approved under 46 CFR part 160, subpart 160.133. The release lever or control in the lifeboat must be red in color, and the area immediately surrounding the control must be a sharply contrasting light color. An illustrated operating instruction plate or placard showing the correct off-load and emergency on-load release procedure and recovery procedure must be posted so that it is visible and legible from the helmsman's normal operating position. The plate or placard must be corrosion resistant and weatherproof and must be marked with the word "DANGER".

(18) *Painter release.* Any painter release must be located such that the lifeboat operator can readily release the painter from the operator's control and steering station.

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

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

(21) *Lifeboat equipment.* Each lifeboat must be designed to accommodate and carry the equipment as specified in 46 CFR 199.175.

(22) *Oars.* Oars are not required on a lifeboat with more than one engine, provided one engine can be operated while the other is disabled.

(23) *Bilge pump.* Each lifeboat that is not automatically self-bailing, must be fitted with a manual bilge pump approved under 46 CFR part 160, subpart 160.044. Each such lifeboat with a capacity of 100 persons or more must carry an additional approved manual bilge pump or an engine-powered bilge pump.

(24) *Exterior color.* The primary color of the exterior of the canopy and interior of partially enclosed lifeboats visible from the air must be a highly visible color equivalent to vivid reddish orange color number 12197 of FED-STD-595C (incorporated by reference, see § 160.135-5), or a durable fluorescent color of a similar hue.

(25) *Self-contained air supply system and fire protection system operating instructions.* Each compressed gas air cylinder must meet the requirements in 46 CFR 147.60. The cylinders must be accessible for removal and charging in place. Water-resistant instructions for starting the water spray and air supply, if fitted, must be provided and mounted in a conspicuous place near the system controls.

(26) *Navigating lights.* Each lifeboat 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.

(27) *Retroreflective material.* The exterior of each lifeboat and its 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 § 160.135-5).

(28) *Permanently attached foldable canopy.* For a partially enclosed lifeboat, the foldable canopy cloth material must meet the specifications for Type II, Class 1 requirements of A-A-55308 (incorporated by reference, see § 160.135-5), or be accepted by the Commandant as equivalent or superior.

(29) *Labels and notices.* Any labels, caution and danger notices, and 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 § 160.135-5), 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.

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

§ 160.135-9 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 lifeboat, 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 a Fiber Reinforced Plastic (FRP) lifeboat;

(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, cloth, and plastic used in the lifeboat'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) Air and water spray systems drawings and specifications, if installed;

(16) Plans for critical subassemblies;

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

(18) Electrical system schematics and specifications;

(19) Stability data, including righting arm curves in the light and loaded condition for both intact and flooded stability;

(20) Drawings of all signs and placards, showing actual inscription, format, color, size, and location on the lifeboat;

(21) Complete data pertinent to the installation and use of the proposed lifeboat, including the light load (condition A) and full load (condition B) weights;

(22) Specifications for the required launching ramp length and angle, and the height of free-fall lifeboat installation above the water;

(23) An operation, maintenance, and training manual as described in §§ 160.135-19 and 160.135-21 of this subpart;

(24) A description of the quality control procedures and record keeping that will apply to the production of the lifeboat, 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 lifeboat complies with the approved plans and the requirements of this subpart;

(25) Full details of any other unique capability;

(26) Any other drawing(s) necessary to show that the lifeboat complies with the requirements of this subpart;

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

(28) The name of the independent laboratory that will perform the duties prescribed in §§ 160.135-11 and 160.135-15 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 lifeboat meets the construction requirements of this subpart;

(3) Accurately depict the proposed lifeboat;

(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.

§ 160.135-11 Fabrication of prototype lifeboats for approval.

(a) If the manufacturer is notified that the information submitted in accordance with § 160.135-9 of this subpart is satisfactory to the Commandant, the manufacturer may proceed with fabrication of the prototype lifeboat as set forth in this section.

(b) Unless the Commandant directs otherwise, an independent laboratory must conduct inspections, tests, and oversight required by this section. Prototype inspections and tests of a lifeboat 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 lifeboat 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 lifeboat 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 § 160.135-9 of this subpart. By conducting at least one inspection during its construction, the independent laboratory must determine the prototype lifeboat conforms with those plans by inspecting—

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

(A) FRP components of each prototype lifeboat 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 § 160.135-5). If an accepted MIL-R-21607E(SH) Grade B resin is used for the prototype lifeboat, additives for fire retardancy must not be used so that the laminate is translucent for inspection purposes. Any prototype test lifeboat with Grade B resins will not be marked in accordance with § 160.135-17 of this subpart for use as a production lifeboat regardless of the outcome of the performance tests.

Whichever accepted resin the manufacturer decides to use for the prototype lifeboat, the same resin must be used in the production lifeboats.

(B) The hull, canopy, and major structural laminates of each prototype FRP lifeboat must be tested for resin content, ultimate flexural strength, and tensile strength. The test samples must be cut out from the prototype lifeboat, or be laid up at the same time, using the same procedures and by the same operators as the laminate used in the lifeboat. 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 § 160.135-5). The flexural ultimate strength must be determined by ASTM D 790 method I (test condition "A", flatwise, dry) or the corresponding ISO 14125 test method (incorporated by reference, see § 160.135-5). The tensile strength, lengthwise, must be determined as per ASTM D 638 or ISO 527 (incorporated by reference, see § 160.135-5).

(C) Each major FRP component, such as the hull, canopy, and inner liner(s), of each prototype FRP lifeboat must be examined and weighed after it is completed but before it is assembled. If the lifeboat is constructed by the spray lay-up technique, the hull and canopy thicknesses must be measured using ultrasonic or equivalent techniques;

(ii) *Steel construction.* Steel sheet and plate used for the hull, floors, and other structural components of a prototype steel lifeboat must meet the bend tests requirement specified under ASTM A 653 (incorporated by reference, see § 160.135–5) after galvanizing or other anti-corrosion treatment has been applied. This may be demonstrated through a supplier's certification papers or through witnessing actual tests.

(iii) *Coated cloth for partially enclosed lifeboats.* Cloth material used in the construction of each prototype lifeboat must be confirmed to have met the requirements specified under § 160.135–7(b)(28) of this subpart. This may be demonstrated through a supplier's certification papers or through witnessing actual tests.

(iv) *Welding.* Structural components of each prototype lifeboat joined by welding must be welded by the welding procedures and materials as per the plans reviewed under § 160.135–9 of this subpart and by welders appropriately qualified.

(v) *Buoyancy foam.* Each major subassembly of a prototype lifeboat, such as the hull with liner and canopy with liner, must be weighed after the buoyancy foam is installed and before it is further assembled.

(vi) Installation of the propulsion system.

(vii) Installation of the steering system.

(viii) Installation of the water spray fire-protection and air support system(s), if fitted.

(3) The independent laboratory must submit the inspection report to the Commandant.

§ 160.135–13 Approval inspections and tests for prototype lifeboats.

(a) After the Commandant notifies the manufacturer that the prototype lifeboat is in compliance with the requirements of § 160.135–11 of this subpart, the manufacturer may proceed with the prototype approval inspections and tests required under this section. The prototype lifeboat, the construction of which was witnessed under § 160.135–11 of this subpart, must be used for the tests in this section.

(b) Except as provided in paragraph (f) of this section, the Coast Guard must conduct the approval inspections and

witness the approval tests required under this section.

(c) *Manufacturer requirements.* To proceed with approval inspections and tests required by this section, the manufacturer must—

(1) Notify the Commandant and cognizant Officer in Charge, Marine Inspection (OCMI) of where the approval inspections and tests required under this section will take place, and such notification must be in sufficient time to allow making travel arrangements;

(2) Arrange a testing schedule that allows for a Coast Guard inspector to travel to the site where the testing is to be performed;

(3) Admit the Coast Guard inspector to any place where work or testing is performed on lifeboats or their component parts and materials for the purpose of—

(i) Conducting inspections as necessary to determine that the prototype is constructed by the methods and with the materials specified in the plans reviewed under § 160.135–9 of this subpart and the inspection report under § 160.135–11 of this subpart;

(ii) Assuring that the quality assurance program of the manufacturer is satisfactory;

(iii) Witnessing tests; and

(iv) Taking samples of parts or materials for additional inspections or test; and

(4) Make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of lifeboats, together with records identifying the lot or serial numbers of the lifeboats in which such materials were used.

(d) *Tests—(1) Prototype lifeboat readiness.* All tests must be conducted on a completely outfitted lifeboat, including fixed equipment such as compass, searchlight, and navigating lights. Loose equipment may be substituted by weights.

(2) *Fiber Reinforced Plastic (FRP) prototype lifeboat lay-up.* For the prototype of each design of an FRP lifeboat, the lay-up must be made of unpigmented resins and clear gel coat.

(3) *Fuel tank.* Each non-portable fuel tank must be tested by a static head above the tank top of 3 m (10 ft) of water without showing any leaks or signs of permanent distortion.

(4) *IMO Revised recommendation on testing.* Each prototype lifeboat of each design must pass each of the tests for davit-launched or free-fall lifeboats, as applicable, described in the IMO Revised recommendation on testing, Part 1, paragraphs 6.1 through 6.17 (incorporated by reference, see

§ 160.135–5). Tests must be conducted in accordance with these paragraphs of IMO Revised recommendation on testing, Part 1, with the following modifications:

(i) *Fire retardancy/release mechanism and engine tests* (Paragraphs 1/6.2, 6.9, 6.10, 6.14). The tests in the following IMO Revised recommendation on testing paragraphs may be accomplished independent of the lifeboat, and may be considered completed and need not be repeated if the tests have been previously shown to meet the necessary requirements—

(A) Paragraph 6.2;

(B) Paragraphs 6.9.3 through 6.9.6;

(C) Paragraph 6.10.2 through 6.10.6; and

(D) Paragraphs 6.14.6 through 6.14.8.

(ii) *Lifeboat overload test* (Paragraph 1/6.3). For a davit launched lifeboat, the overload test must be conducted with the lifeboat suspended from the lifting hooks. During this test, the canopy of a free-fall lifeboat must not deform so as to harm any potential occupants.

(iii) *Impact test* (Paragraph 1/6.4). The rigid vertical surface must not be displaced or deformed as a result of the test.

(iv) *Lifeboat seating space test* (Paragraph 1/6.7). The average mass of persons used to test the lifeboat seating space must be determined by weighing as a group or individually. Each person must wear an inherently buoyant SOLAS lifejacket with at least 150 N of buoyancy or a Coast Guard-approved lifejacket approved under approval series 160.155. For other than a totally enclosed lifeboat, the operator(s) must demonstrate that the lifeboat can be operated while wearing a Coast Guard approved, insulated-buoyant immersion suit approved under approval series 160.171. The Commandant will give consideration to requests to test at, and designate lifeboats for, a heavier occupant weight than that stated in the IMO LSA Code, Chapter IV (incorporated by reference, § 160.135–5).

(v) *Flooded stability test* (Paragraph 1/6.8). Any materials used to raise the test weights representing the lifeboat occupants above the seat pan must be at least as dense as fresh water.

(vi) *Lifeboat operational test, Operation of engine* (Paragraph 1/6.10.1). For the 4-hour lifeboat maneuvering period, the lifeboat must not (except for a short period to measure towing force and to demonstrate towing fixture durability) be secured, and must be run through its full range of speeds and full range of all controls throughout the period.

(vii) *Survival recovery test* (Paragraph 1/6.10.8). The recovery demonstration must show that no more than two crewmembers are required to recover a helpless person of ninety-fifth percentile by weight described in ASTM F 1166 (incorporated by reference, see § 160.135–5) while the crewmembers and helpless person are each wearing a lifejacket.

(viii) *Flooded capsizing test* (Paragraph 1/6.14.3–.5). For any lifeboat also approved as a rescue lifeboat, the lifeboat must return to an upright position and, without undue delay, the crew must be able to use the lifeboat again as a lifeboat.

(ix) *Fire test* (Paragraph 1/6.16.4). The locations where temperatures are measured along with the rationale for the proposed locations must be provided to the Commandant for approval prior to the testing.

(x) *Water spray tests* (Paragraph 1/6.16.9). The delivery rate of water, or the sprayed water film thickness over the lifeboat, must be at least equivalent to that used to achieve passing results for the fire test. Full coverage must be obtained without the need to rock the lifeboat or induce wetting by wiping or applying any agent.

(xi) *Measuring and evaluating acceleration forces* (Paragraph 1/6.17.5). For free-fall lifeboats, the selection, placement, and mounting of the accelerometers along with the rationale for the proposed selection, placement, and mounting must be provided to the Commandant for approval prior to the testing.

(xii) *Evaluation acceleration forces with the dynamic response model* (Paragraph 1/6.17.9). For free-fall lifeboats only, sections 6.17.9 thru 6.17.12 must be used along with the displacement limits for lifeboats in Table 2 under “Evaluation with the dynamic response model”.

(5) *Visual inspection*. Each lifeboat must be visually inspected to confirm—

- (i) Compliance with this subpart;
- (ii) Conformance with plans reviewed under § 160.135–9 of this subpart; and
- (iii) Ease of operation and maintenance.

(e) *Test waiver*. The Commandant may waive certain tests for a lifeboat identical in construction to smaller and larger lifeboats that have successfully completed the tests. Tests associated with lifeboat components that have already been approved by the Commandant are not required to be repeated.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness

approval tests required by this section so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005–9(a)(5) by preparing and submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, see § 160.135–5). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as permitted by paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final plans of the lifeboat as built. The plans must include, in triplicate—

(i) The instructions for training and maintenance described in §§ 160.135–19 and 160.135–21 of this subpart; and

(ii) The final version of the plans required under § 160.135–9 of this subpart.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005–13.

§ 160.135–15 Production inspections, tests, quality control, and conformance of lifeboats.

(a) Unless the Commandant directs otherwise, an independent laboratory must conduct or witness inspections, tests, and oversight required by this section. Production inspections and tests of lifeboats 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 production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer’s responsibility*. The manufacturer must—

(1) Institute a quality control procedure to ensure that all production lifeboats are produced to the same standard, and in the same manner, as the prototype lifeboat approved by the Commandant. The manufacturer’s

quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) to ensure that all tests are performed as described in this section;

(3) Submit to the Commandant, a yearly report that contains the following—

(i) Serial number and date of final assembly of each lifeboat constructed;

(ii) Name of the representative of the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section); and

(iii) Name of the vessel and company receiving the lifeboat, if known;

(4) Ensure that the arrangement and materials entering into the construction of the lifeboat are in accordance with plans approved under § 160.135–13(h) of this subpart;

(5) Allow an independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) access to any place where materials are stored for the lifeboat, work or testing is performed on lifeboats or their component parts and materials, or records are retained to meet the requirements of paragraph (c) below, for the purpose of—

(i) Assuring that the quality control program of the manufacturer is satisfactory;

(ii) Witnessing tests; or

(iii) Taking samples of parts or materials for additional inspections or tests; and

(6) Ensure that the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) conducts the inspections and witnesses the tests required by paragraph (e)(2) of this section, and further conducts a visual inspection to verify that the lifeboats are being made in accordance with the plans approved under § 160.135–13(h) of this subpart and the requirements of this subpart.

(c) *Recordkeeping*. The manufacturer must maintain records in accordance with 46 CFR 159.007–13. The manufacturer must keep records of all items listed in this section for at least 5 years from the date of termination of approval of each lifeboat. The records must include—

(1) A copy of this subpart, other CFR sections referenced in this subpart, and each applicable document listed in § 160.135–5 of this subpart;

(2) A copy of approved plans, documentation, and certifications;

(3) A current certificate of approval for each approved lifeboat;

(4) Affidavits, certificates, or invoices from the suppliers identifying all essential materials used in the production of approved lifeboats, together with records identifying the serial numbers of the lifeboats in which such materials were used;

(5) Start and finish date and time of the lay-up of each major Fiber Reinforced Plastic (FRP) component such as the hull, canopy, and inner liner and the names of the operator(s);

(6) Start and finish date and time of pouring of foam-in-place rigid buoyancy foam, and name of operator(s);

(7) Records of all structural welding and name of operator(s);

(8) Records of welder certificates, training and qualifications;

(9) Date and results of calibration of test equipment and the name and address of the company or agency that performed the calibration;

(10) The serial number of each production lifeboat, along with records of its inspections and tests carried out under this section; and

(11) The original purchaser of each lifeboat and the vessel on which it was installed, if known.

(d) *Independent laboratory responsibility.* The independent laboratory must perform or witness the inspections and tests under paragraph (e)(2) of this section for each Coast Guard-approved lifeboat to be installed on a U.S.-flagged vessel. If the manufacturer also produces lifeboats for approval by other maritime safety administrations, the inspections may be coordinated with inspection visits for those administrations.

(e) *Production inspections and tests.* Each approved lifeboat must be inspected and tested in accordance with each of the following procedures:

(1) *In-process inspections and tests.* Each production lifeboat must be examined during lay-up of the hull to verify that the lay-up conforms to the approved drawings. Each FRP major component, such as the hull, canopy, and inner liner, must be examined and weighed after it is completed but before assembled. If the lifeboat is constructed by the spray lay-up technique, the hull and canopy thicknesses must be measured using ultrasonic or equivalent techniques. Laboratory tests of laminates must be conducted at this time. Test samples must be cut out from the lifeboat itself or be laid up at the same time, using the same procedures and by the same operators as the laminate used in the lifeboat. The number of samples used for each test, and the conditions and test methods

used, must be as described in the applicable test specified in this paragraph.

(i) *Weight.* The weight of each FRP section, such as hull, canopy, and inner liner, must be within 10 percent of similar sections of the prototype lifeboat. These weights must be the bare laminate weights. Backing plates that are molded into the laminate may be included.

(ii) *Thickness.* The average thickness of each section of sprayed-up laminate must be within 20 percent of the corresponding sections of the prototype.

(iii) *Resin content.* Laminate samples from the hull, canopy, and inner liners must be tested in accordance with ASTM D 2584 or ISO 1172 (incorporated by reference, see § 160.135–5). The resin content must be within 8 percentage points of the prototype results. If the resin content does not comply, flexural ultimate strength and tensile tests in paragraph (e)(1)(iv) of this section must be conducted.

(iv) *Flexural ultimate strength and tensile tests.* Each laminate sample from each major component, such as hull and liner, that does not comply with the resin content requirement in paragraph (e)(1)(iii) of this section, and from each component of every fifth production lifeboat, must be subjected to the flexural ultimate strength and tensile strength tests as described in § 160.135–13(c)(2)(i)(B) of this subpart. The values must be at least 90 percent of the prototype results.

(v) *Buoyancy material.* If block foam buoyancy material is used, each piece must be weighed after it is cut and shaped to make sure that the correct amount of foam is installed. If foamed-in-place buoyancy material is used, a separate sample of the foam must be poured, and used to make a density determination after it has set. The density must be $32 \pm 8 \text{ kg/m}^3$ ($2 \pm 0.5 \text{ lb/ft}^3$).

(vi) *Steel sheet and plate.* Steel sheet and plate for the hull, floors, and other structural components must meet ASTM A 36 and ASTM A 653 as applicable (incorporated by reference, see § 160.135–5). Non-corrosive resistant steel must meet the coating mass and bend tests requirement specified under ASTM A 653. Compliance for this paragraph can be ascertained through supplier's certification papers or through conducting actual tests.

(vii) *Cloth.* The cloth material used for the construction of each partially enclosed lifeboat must meet the material specification of A-A 55308 (incorporated by reference, see § 160.135–5). This compliance can be

ascertained through supplier's certification papers or through witnessing actual tests.

(viii) *Fuel tank.* Each fuel tank must be tested by a static head above the tank top of 3 m (10 ft) of water without showing any leaks or signs of permanent distortion.

(ix) *Welding.* It must be determined that structural components joined by welding was performed by welders who are appropriately qualified and that the welding procedure and materials are as per the plans approved under § 160.135–13(h) of this subpart.

(2) *Post assembly tests and inspections.* The finished lifeboat must be visually inspected inside and out. The manufacturer must develop and maintain a visual inspection checklist designed to ensure that all applicable requirements have been met and the lifeboat is equipped in accordance with approved plans. At a minimum, each lifeboat must be operated for 2 hours during which all lifeboat systems must be exercised.

§ 160.135–17 Marking and labeling.

(a) Each lifeboat must be marked with a plate or label permanently affixed to the hull in a conspicuous place readily accessible for inspection and sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the lifeboat.

(b) The plate or label must be in English, but may also be in other languages.

(c) The plate or label must contain the—

(1) Name and address of the manufacturer;

(2) Manufacturer's model identification;

(3) Name of the independent laboratory that witnessed the prototype or production test and inspections;

(4) Serial number of the lifeboat;

(5) U.S. Coast Guard approval number;

(6) Month and year of manufacture;

(7) Material of hull construction;

(8) Number of persons for which the lifeboat is approved;

(9) Light load and full load (condition A and condition B weight); and

(10) Word "SOLAS."

§ 160.135–19 Operating instructions and information for the ship's training manual.

(a) Each lifeboat must have instructions and information for the ship's training manual that use the symbols from IMO Res. A.760(18) (incorporated by reference, see § 160.135–5) to describe the location and operation of the lifeboat.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

(c) The lifeboat manufacturer must make the instructions and information required by paragraph (a) of this section available—

(1) In English to purchasers of a lifeboat approved by the Coast Guard; and

(2) In the form of an instruction placard providing simple procedures and illustrations for operation of the lifeboat. The placard must be not greater than 36 cm (14 in) by 51 cm (20 in), and must be made of durable material and suitable for display near installations of lifeboats on vessels.

§ 160.135–21 Operation and maintenance instructions.

(a) Each lifeboat must have operation and maintenance instructions that—

(1) Follows the general format and content specified in MSC.1 Circ. 1205 (incorporated by reference, see § 160.135–5); and

(2) Includes a checklist for use in monthly, external visual inspections of the lifeboat.

(b) The lifeboat manufacturer must make the manual required by paragraph (a) of this section available in English to purchasers of a lifeboat approved by the Coast Guard.

(c) The operation and maintenance instructions required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

§ 160.135–23 Procedure for approval of design, material, or construction change.

(a) Each change in design, material, or construction from the plans approved under 46 CFR 159.005–13 and § 160.135–13(h) of this subpart must be approved by the Commandant before being used in any production lifeboat. The manufacturer must submit any such change following the procedures in § 160.135–9 of this subpart, but documentation on items that are unchanged from the plans approved under 46 CFR 159.005–13 and § 160.135–13(h) of this subpart need not be resubmitted.

(b) Unless determined by the Commandant to be unnecessary, a prototype lifeboat with each change described in paragraph (a) of this section must be made and tested according to the procedures for new approvals in §§ 160.135–9 through 160.135–13 of this subpart.

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

Subpart 160.151—Inflatable Liferrafts (SOLAS)

29. Revise § 160.151–1 to read as follows:

§ 160.151–1 Scope.

This subpart prescribes standards, tests, and procedures for approval by the Coast Guard of inflatable liferafts. This subpart does not apply to any inflatable liferaft approved by the Commandant before (EFFECTIVE DATE OF FINAL RULE), so long as the liferaft satisfies the annual servicing requirements set forth in 46 CFR 160.151–57.

30. In § 160.151–3—

a. In the definition for “Commandant”, remove the text “(CG–512)” and add, in its place, the text “(CG–5214)”; and

b. Add, in alphabetical order, the definition for “Officer in Charge, Marine Inspection (OCMI)”, to read as follows:

§ 160.151–3 Definitions.

* * * * *

Officer in Charge, Marine Inspection (OCMI) means an officer of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in part 1 of this chapter, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The “cognizant OCMI” is the OCMI who has immediate jurisdiction over a vessel for the purpose of performing the duties previously described.

* * * * *

31. Revise § 160.151–5 to read as follows:

§ 160.151–5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, it is available

for inspection at COMMANDANT (CG–5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593–7126 and is available from the sources indicated in this section.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428–2959.

(1) ASTM F 1014–02(2007), Standard Specification for Flashlights on Vessels, IBR approved for § 160–151–21 (“ASTM F 1014”).

(2) [Reserved]

(c) General Services Administration, Federal Acquisition Service, Office of the FAS Commissioner, 22200 Crystal Drive, 11th Floor, Arlington, VA 22202, 703–605–5400.

(1) Federal Standard 595C—Colors Used in Government Procurement, IBR approved for §§ 160.151–15 and 160.151–17 (“FED–STD–595C”).

(2) [Reserved]

(d) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution A.657(16), Instructions for Action in Survival Craft, October 1989, IBR approved for § 160.151–21 (“IMO Res. A.657(16)”).

(2) IMO Resolution A.658(16), Use and Fitting of Retro-reflective Materials on Life-saving Appliances, IBR approved for § 160.151–15 (“IMO Res. A.658(16)”).

(3) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for §§ 160.151–7, 160.151–15, 160.151–17, 160.151–21, 160.151–29, 160.151–33, 160.151–59, and 160.151–61 (“IMO LSA Code”).

(4) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for §§ 160.151–21, 160.151–27, 160.151–29, 160.151–31, and 160.151–57 (“IMO Revised recommendation on testing”).

(e) International Standards Organization ISO Copyright Office, Case Postale 56, CH 1211 Geneva 20.

(1) ISO 15738:2002 Ships and marine technology—Gas inflation systems for inflatable life-saving appliances, IBR approved for § 160.151–27 (“ISO 15738”).

(2) ISO 17339:2002 Ships and marine technology—Sea anchors for survival craft and rescue boats, IBR approved for § 160.151–21 (“ISO 17339”).

(3) ISO 18813:2006 Ships and marine technology—Survival equipment for

survival craft and rescue boats, IBR approved for § 160.151–21 (“ISO 18813”).

(f) Military Specifications and Standards, Standardization Documents Order Desk, Building 4D, 700 Robins Avenue, Philadelphia PA 19111–5094, <https://assist.daps.dla.mil/quicksearch/>.

(1) MIL–C–17415E—Cloth, Coated, and Webbing, Inflatable Boat and Miscellaneous Use, IBR approved for § 160.151–15 (“MIL–C–17415E”).

(2) [Reserved]

32. In § 160.151–7—

a. In the introductory text, after the words “Chapter III of SOLAS”, add the words “and the IMO LSA Code (incorporated by reference, see § 160.151–5)”; and after the words “provisions of”, remove the word “SOLAS” and add, in its place, the words “the IMO LSA Code.”;

b. Revise paragraphs (a) and (b) to read as set forth below; and

c. Remove paragraphs (c), (d), and (e).

§ 160.151–7 Construction of inflatable liferafts.

* * * * *

(a) IMO LSA Code 1.2, General requirements for life-saving appliances; and

(b) IMO LSA Code 4.2, Inflatable liferafts.

§ 160.151–11 [Amended]

33. In § 160.151–11(b) introductory text, after the words “must submit an application”, add the words “to the Commandant”.

34. In § 160.151–15—

a. In the introductory text, remove the words “indicated in § 160.151–7” and add, in their place, the words “and the IMO LSA Code (incorporated by reference, see § 160.151–5)”; and

b. In paragraph (a) introductory text, remove the words “Regulation III/30.2.1” and add, in their place, the words “IMO LSA Code, Chapter I/1.2.1.”; after the words “meeting MIL–C–17415E”, add the words “(incorporated by reference, see § 160.151–5)”; after the words “equivalent or superior” remove the symbol “-” and add, in its place, the words “and be capable of withstanding the prototype tests specified in 160.151–27 of this subchapter.”;

c. Remove paragraphs (a)(1), (a)(2), (a)(3), and (a)(4);

d. In paragraph (b), remove the words “Regulation III/30.2.1” and add, in their place, the words “IMO LSA Code, Chapter I/1.2.2.1.”;

e. In paragraph (c), remove the words “Regulation III/30.2.1” and add, in their place, the words “IMO LSA Code Chapter I/1.2.2.1.”;

f. In paragraph (d), remove the words “Regulation III/30.2.4” and add, in their

place, the words “IMO LSA Code, Chapter I/1.2.2.4.”;

g. In paragraph (e), remove the words “Regulation III/30.2.6” and add, in their place, the words “IMO LSA Code, Chapter I/1.2.2.6.”; and remove the words “(color number 34 of NBS Special Publication 440)” and add, in their place, the words “(color number 12197 of FED–STD–595C (incorporated by reference, see § 160.151–5))”;

h. In paragraph (f), remove the words “Regulation III/30.2.7” and add, in their place, the words “IMO LSA Code, Chapter I/1.2.2.7.”; and remove the words “IMO Resolution A.658(16)” and add, in their place, the words “IMO Res. A.658(16) (incorporated by reference, see § 160.151–5)”; and

i. In paragraph (g), remove the words “Regulation III/38.1.4” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.1.4.”;

j. In paragraph (h), remove the words “Regulation III/38.2.2” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.2.2.”;

k. In paragraph (i), remove the words “Regulation III/38.3.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.3.1.”;

l. Remove and reserve paragraph (j);

m. In paragraph (k), remove the words “Regulation III/38.6.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.6.1.”;

n. In paragraph (l) introductory text, remove the words “Regulation III/39.2.3” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.2.3.”;

o. Redesignate paragraphs (m), (n), and (o) as paragraphs (n), (o), and (p) respectively.

p. Add paragraph (m) to read as set out below;

q. In newly redesignated paragraph (n), remove the words “Regulation III/39.4.2” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.4.2.”;

r. In newly redesignated paragraph (o), remove the words “Regulation III/39.6.2” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.3.3.”; after the word “exterior”, add the words “and interior”; and remove the word “lamp” and add, in its place, the word “lamps”; and

s. In newly redesignated paragraph (p) introductory text, remove the words “Regulation III/39.7.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.6.1.”

§ 160.151–15 Design and performance of inflatable liferafts.

* * * * *

(m) *Inflation systems (IMO LSA Code, Chapter IV/4.2.2.3)*. Gas inflation

systems, including gas-cylinder valves; gas-cylinder operating heads; high-pressure hose assemblies; and pressure relief, inflation/deflation, and non-return/transfer valves; must be certified as complying with the requirements of ISO 15738 (incorporated by reference, see § 160.151–5).

* * * * *

§ 160.151–17 [Amended]

35. In 160.151–17—

a. In the introductory text, after the words “regulations of SOLAS”, add the words “and IMO LSA Code (incorporated by reference, see § 160.151–5)”; and

b. In paragraph (a), remove the words “Regulation III/39.5.1” and add, in their place, the words “the IMO LSA Code, Chapter IV/4.2.5.”;

c. In paragraph (a)(2)(vii), remove the words “(color number 34 of NBS Special Publication 440)” and add, in their place, the words “(color number 12197 of FED–STD–595C (incorporated by reference, see § 160.151–5))”;

d. In paragraph (b), remove the words “Regulation III/39.4.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.4.1.”; and

e. Remove and reserve paragraph (c).

36. In § 160.151–21—

a. In the introductory text, after the words “regulations of SOLAS”, add the words “and the IMO LSA Code (incorporated by reference, see § 160.151–5)”; and

b. In paragraph (a), remove the first instance of the words “Regulation III/38.5.1.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.1.”; and after the words “buoyant heaving line”, remove the words “described by Regulation III/38.5.1.1.”;

c. In paragraph (b), remove the first instance of the words “Regulation III/38.5.1.2” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.2.”; and after the words “folding knife”, remove the words “carried as permitted by Regulation III/38.5.1.2.”;

d. In paragraph (c), remove the first instance of the words “Regulation III/38.5.1.3” and add, in their place, the words “(IMO LSA Code, Chapter IV/4.1.5.1.3 and ISO 18813 (incorporated by reference, see § 160.151–5))”; and after the words “Each bailer”, remove the words “described by Regulation III/38.5.1.3.”;

e. In paragraph (d), remove the first instance of the words “Regulation III/38.5.1.4” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.4.”; and after the words “Each sponge”, remove the words “described by Regulation III/38.5.1.4.”;

f. In paragraph (e), remove the first instance of the words “Regulation III/38.5.1.5” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.5 and ISO 17339 (incorporated by reference, see § 160.151–5)”; remove the two instances of the words “described by Regulation III/38.5.1.5”; and after the words “hailed in by one person.”, add the sentence “Sea anchors must be attached to the raft at a position so as to orient the primary entrance away from the seas as far as practicable while still allowing the sea anchor to be retrieved by a person inside the raft.”;

g. In paragraph (f), remove the words “Regulation III/38.5.1.6” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.6 and ISO 18813”; and remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing (incorporated by reference, see § 160.151–5).”;

h. In paragraph (g), remove the first instance of the words “Regulation III/38.5.1.7” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.7 and ISO 18813”; and after the words “a tin-opener”, remove the words “described by Regulation III/38.5.1.7”;

i. In paragraph (h), remove the first instance of the words “Regulation III/38.5.1.8” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.8”; and after the words “Each first-aid kit”, remove the words “described by Regulation III/38.5.1.8”;

j. In paragraph (i), remove the first instance of the words “Regulation III/38.5.1.9” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.9 and ISO 18813”; and after the words “The whistle”, remove the words “described by Regulation III/38.5.1.9”;

k. In paragraph (j), remove the first instance of the words “Regulation III/38.5.1.10” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.10”; and after the words “Each rocket parachute flare”, remove the words “described by Regulation III/38.5.1.10”;

l. In paragraph (k), remove the first instance of the words “Regulation III/38.5.1.11” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.11”; and after the words “Each hand flare”, remove the words “described by Regulation III/38.5.1.11”;

m. In paragraph (l), remove the first instance of the words “Regulation III/38.5.1.12” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.12”; and after the words “Each buoyant smoke signal”, remove the words “described by Regulation III/38.5.1.12”;

n. In paragraph (m), remove the first instance of the words “Regulation III/38.5.1.13” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.13”; after the words “The waterproof electric torch”, remove the words “described by Regulation III/38.5.1.13”; and after the words “see § 160.151–5”, add the symbol “)”;;

o. In paragraph (n), remove the words “Regulation III/38.5.1.14” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.14”;

p. In paragraph (o), remove the first instance of the words “Regulation III/38.5.1.15” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.15”; and after the words “Each signalling mirror” remove the words “described by Regulation III/38.5.1.15”;

q. In paragraph (p), remove the first instance of the words “Regulation III/38.5.1.16” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.16”; and after the words “transparent waterproof container”, remove the words “as described by Regulation III/38.5.1.16”;

r. In paragraph (q), remove the words “Regulation III/38.5.1.17” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.17”;

s. In paragraph (r), remove the words “Regulation III/38.5.1.18.” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.18”;

t. In paragraph (s), remove the first instance of the words “Regulation III/38.5.1.19” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.19”; remove the words “The fresh water required by Regulation III/38.5.1.19 must be “emergency drinking water”” and add, in their place, the words “Emergency drinking water must be”; after the words “The desalting apparatus”, remove the words “described in Regulation III/38.5.1.19”; and remove the last sentence of the paragraph;

u. In paragraph (t), remove the first instance of the words “Regulation III/38.5.1.20” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.20 and ISO 18813”; and after the words “The drinking cup”, remove the words “described in Regulation III/38.5.1.20”;

v. In paragraph (u), remove the first instance of the words “Regulation III/38.5.1.21” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.21 and ISO 18813”; and after the words “The anti-seasickness medicine”, remove the words “required by Regulation III/38.5.1.21”;

w. In paragraph (v), remove the first instance of the words “Regulation III/38.5.1.22” and add, in their place, the

words “IMO LSA Code, Chapter IV/4.1.5.1.22 and ISO 18813”; and after the words “The instructions”, remove the words “required by Regulation III/38.5.1.22”;

x. In paragraph (v)(3), remove the words “IMO Resolution A.657(16)” and add, in their place, the words “IMO Res. A.657(16) (incorporated by reference, see § 160.151–5)”;

y. In paragraph (w), remove the words “Regulation III/38.5.1.23” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.23”;

z. In paragraph (w)(3), remove the words “IMO Resolution A.657(16)” and add, in their place, the words “IMO Res. A.657(16)”;

aa. In paragraph (x), remove the first instance of the words “Regulation III/38.5.1.24” and add, in their place, the words “IMO LSA Code, Chapter IV/4.1.5.1.24”; and after the words “Each thermal protective aid”, remove the words “described by Regulation III/38.5.1.24”;

bb. In paragraph (y), remove the first instance of the words “Regulation III/39.10.1.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.9.1.1 and ISO 18813”; and after the words “The repair outfit”, remove the words “required by Regulation III/39.10.1.1”;

cc. Revise paragraph (y)(2) to read as set out below;

dd. In paragraph (y)(3), remove the text “; and” and add, in its place, the symbol “.”;

ee. Remove paragraph (y)(4); and
ff. In paragraph (z), remove the first instance of the words “Regulation III/39.10.1.2” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.9.1.2”; and after the words “The pump or bellows”, remove the words “required by Regulation III/39.10.1.2”.

§ 160.151–21 Equipment required for SOLAS A and SOLAS B inflatable liferafts.

* * * * *

(y) * * *
(2) Five or more tube patches at least 50 mm (2 in) in diameter (the Commandant will consider self-adhesive patches per ISO 18813 as an alternative); and

* * * * *

§ 160.151–27 [Amended]

37. In § 160.151–27—
a. Remove each instance of the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing”;

b. In paragraph (a), remove the word “inclusive”; and

c. In paragraph (c)(5), remove the word “liters” and add, in its place, the text “L”.

§ 160.151–29 [Amended]

38. In § 160.151–29, in the introductory text, remove the words “Regulation III/39.5.1” and add, in their place, the words “IMO LSA Code, Chapter IV/4.3.5 (incorporated by reference, see § 160.151–5)”; and remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing (incorporated by reference, see § 160.151–5)”.

39. In § 160.151–31—

a. Remove each instance of the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing”;

b. In paragraph (a) introductory text, remove the word “part” and add, in its place, the text “46 CFR part”; and remove the words “of this chapter”;

c. In paragraph (c), remove the symbol “§” and add, in its place, the text “46 CFR”; and remove the words “of this chapter”;

d. In paragraph (d), after the words “through 5.1.6 inclusive,” add the words “(incorporated by reference, see § 160.151–5)”; and

e. Add paragraph (h) to read as follows:

§ 160.151–31 Production inspections and tests of inflatable liferafts.

* * * * *

(h) The manufacturer must notify the cognizant Officer in Charge, Marine Inspection (OCMI) whenever final production inspections and tests are to be performed so that the OCMI may assign a marine inspector to the factory to witness the applicable tests and to ensure that the quality assurance program of the manufacturer is satisfactory.

§ 160.151–33 [Amended]

40. In 160.151–33—

a. In paragraph (b) introductory text, remove the words “Regulation III/39.7.3 of SOLAS” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.6.3 (incorporated by reference, see § 160.151–5)”; and

b. In paragraph (c) introductory text, remove the words “Regulation III/39.8 of SOLAS” and add, in their place, the words “IMO LSA Code, Chapter IV/4.2.7.1”.

§ 160.151–57 [Amended]

41. In 160.151–57—

a. In paragraph (b)(1), remove the words “IMO Resolution A.689(17) paragraph 2/5.1.5” and add, in their place, the words “IMO Revised recommendation on testing, paragraph 2/5.1.5 (incorporated by reference, see § 160.151–5)”; and

b. In paragraph (b)(5)(i), remove the words “if its expiration date has passed” and add, in their place, the words “at the time of servicing if there is less than 6 months remaining before the expiration date”;

c. In paragraph (b)(11), remove the words “IMO Resolution A.658(16)” and add, in their place, the words “IMO Revised recommendation on testing”; add the words “46 CFR” in front of the words “part 164”; and remove the words “of this subchapter”;

d. In paragraph (e), remove the words “49 CFR 173.34” and add, in their place, the text “49 CFR 180.205”;

e. In paragraph (f), remove the words “IMO Resolution A.689(17)” and add, in their place, the words “IMO Revised recommendation on testing”; and

f. In paragraph (g), after the text “(b) through”, add the text “(f)”.

§ 160.151–59 [Amended]

42. In 160.151–59(a), remove the words “regulations III/18.2, 19.3, 51, and 52 of SOLAS” and add, in their place, the words “SOLAS Chapter III, Regulation 35 (III/35)”.

§ 160.151–61 [Amended]

43. In 160.151–61(a), remove the words “regulations III/19.3 and III/52 of SOLAS” and add, in their place, the words “SOLAS Chapter III, Regulation 36 (III/36)”.

44. Add subpart 160.156 to read as follows:

Subpart 160.156—Rescue Boats and Fast Rescue Boats (SOLAS)

Sec.

- 160.156–1 Scope.
- 160.156–3 Definitions.
- 160.156–5 Incorporation by reference.
- 160.156–7 Design, construction, and performance of rescue boats and fast rescue boats.
- 160.156–9 Preapproval review.
- 160.156–11 Fabrication of prototype rescue boats for approval.
- 160.156–13 Approval inspections and tests for prototype rescue boats.
- 160.156–15 Production inspections, tests, quality control, and conformance of rescue boats.
- 160.156–17 Marking and labeling.
- 160.156–19 Operating instructions and information for the ship’s training manual.
- 160.156–21 Operation and maintenance instructions.
- 160.156–23 Procedure for approval of design, material, or construction change.

Subpart 160.156—Rescue Boats and Fast Rescue Boats (SOLAS)**§ 160.156–1 Scope.**

This subpart prescribes standards, tests, and procedures for seeking Coast Guard approval of a rescue boat,

including a fast rescue boat, complying with SOLAS and the IMO LSA Code, for use on waters other than protected waters as defined in 46 CFR 175.400.

§ 160.156–3 Definitions.

In addition to the definitions in the IMO LSA Code (incorporated by reference, see § 160.156–5), in this subpart, the term:

Commandant means the Commandant (CG–5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593–7126.

Full load means the weight of the complete rescue boat, including all required equipment, provisions, fuel, and the number of persons for which it is approved. This is also known as the condition “B” weight.

Independent laboratory has the same meaning as 46 CFR 159.001–3. A list of accepted independent laboratories is available from the Commandant and online at <http://cgmix.uscg.mil>.

Light load means the weight of the complete rescue boat empty and does not include fuel, required equipment, or the equivalent weight of persons. This is also known as the condition “A” weight.

Officer In Charge, Marine Inspection (OCMI) means an officer of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in part 1 of this chapter, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The “cognizant OCMI” is the OCMI who has immediate jurisdiction over a vessel for the purpose of performing the duties previously described.

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.

§ 160.156–5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, it is available

for inspection at COMMANDANT (CG-5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593-7126 and is available from the sources indicated in this section.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959.

(1) ASTM A 36/A 36M-08 Standard Specification for Carbon Structural Steel, IBR approved for §§ 160.156-7 and 160.156-15 ("ASTM A 36").

(2) ASTM A 653/A 653M-08 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, IBR approved for §§ 160.156-7, 160.156-11 and 160.156-15 ("ASTM A 653").

(3) ASTM B 209-07 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate, IBR approved for § 160.135-7 ("ASTM B 209").

(4) ASTM D 638-08 Standard Test Method for Tensile Properties of Plastics, IBR approved for § 160.156-11 ("ASTM D 638").

(5) ASTM D 790-07e1 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials, IBR approved for § 160.156-11 ("ASTM D 790").

(6) ASTM D 2584-08 Standard Test Method of Ignition Loss for Cured Reinforced Resins, IBR approved for §§ 160.156-11 and 160.156-15 ("ASTM D 2584").

(7) ASTM D 4029-09 Standard Specification for Finished Woven Glass Fabrics, IBR approved for § 160.156-7 ("ASTM D 4029").

(8) ASTM F 1166-07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities, IBR approved for §§ 160.156-7 and 160.156-13 ("ASTM F 1166").

(c) General Services Administration, Federal Acquisition Service, Office of the FAS Commissioner, 22200 Crystal Drive, 11th Floor, Arlington, VA 22202, 703-605-5400.

(1) Federal Standard 595C—Colors Used in Government Procurement, IBR approved for § 160.156-7 ("FED-STD-595C").

(2) [Reserved]

(d) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution A.658(16), Use and Fitting of Retro-reflective Materials on Life-saving Appliances, IBR approved for § 160.156-7 ("IMO Res. A.658(16)").

(2) IMO Resolution A.760(18), Symbols Related to Life-Saving Appliances and Arrangements, IBR approved for §§ 160.156-7 and 160.156-19 ("IMO Res. A.760(18)").

(3) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for §§ 160.156-7 and 160.156-13 ("IMO Revised recommendation on testing").

(4) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for § 160.156-7 ("IMO LSA Code").

(5) MSC Circular 980, Standardized life-saving appliance evaluation and test report forms, IBR approved for §§ 160.156-7 and 160.156-13 ("IMO MSC Circ. 980").

(6) MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems, IBR approved for § 160.156-21 ("IMO MSC.1 Circ. 1205").

(e) International Organization for Standardization (ISO), ISO Central Secretariat [ISO Copyright Office], Case Postale 56, CH-1211 Geneve 20, Switzerland.

(1) ISO 14125:1998 Fibre-reinforced plastic composites—Determination of flexural properties, IBR approved for § 160.156-11 ("ISO 14125").

(2) ISO 527-1:1993 Plastics—Determination of tensile properties, IBR approved for § 160.156-11 ("ISO 527").

(3) ISO 1172:1996 Textile-glass-reinforced plastics—Prepregs, moulding compounds and laminates—Determination of the textile-glass and mineral-filler content—Calcination methods, IBR approved for §§ 160.156-11 and 160.156-15 ("ISO 1172").

(4) ISO 15372:2000 Ships and marine technology—Inflatable rescue boats—Coated fabrics for inflatable chambers, IBR approved for §§ 160.156-7 and 160.156-15 ("ISO 15372").

(f) Military Specifications and Standards, Standardization Documents Order Desk, Building 4D, 700 Robins Avenue, Philadelphia PA 19111-5094, <https://assist.daps.dla.mil/quicksearch/>.

(1) MIL-C-19663D, Cloth, Woven Roving, For Plastic Laminate, 4 AUG 1998, IBR approved for § 160.156-7 ("MIL-C-19663D").

(2) MIL-P-17549D(SH): Plastic Laminates, Fibrous Glass Reinforced, Marine, 31 AUG 1981, IBR approved for §§ 160.156-7 and 160.156-11 ("MIL-P-17549D(SH)").

(3) MIL-R-21607E(SH), Resins, Polyester, Low Pressure Laminating, Fire-Retardant, 25 May 1990, IBR

approved for § 160.156-11 ("MIL-R-21607E(SH)").

(g) Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, PA 15096.

(1) SAE J1527-93, Marine Fuel Hoses, IBR approved for § 160.156-7 ("SAE J1527").

(2) [Reserved]

(h) Underwriters Laboratories (UL), 2600 NW Lake Rd, Camas, WA 98607-8542, Phone: 877-854-3577.

(1) UL 1102, Standard for Nonintegral Marine Fuel Tanks, IBR approved for § 160.156-7 ("UL 1102").

(2) UL 1185, Standard for Portable Marine Fuel Tanks, IBR approved for § 160.156-7 ("UL 1185").

§ 160.156-7 Design, construction and performance of rescue boats.

(a) To seek Coast Guard approval of a rescue boat, including a fast rescue boat, a manufacturer must comply with, and each rescue boat must meet, the requirements of the following:

(1) IMO LSA Code Chapter V (incorporated by reference, see § 160.156-5);

(2) IMO Revised recommendation on testing, Part 1/7 (incorporated by reference, see § 160.156-5) applicable to the type of rescue boat;

(3) 46 CFR part 159; and

(4) This subpart.

(b) Each rescue boat must meet the following requirements:

(1) *Design.* (i) Each rescue boat must be designed to be operable by persons wearing immersion suits.

(ii) Each rescue boat should be designed following standard human engineering practices described in ASTM F 1166 (incorporated by reference, see § 160.156-5). Design limits should be based on a range from the fifth percentile female to the ninety-fifth percentile male values for critical body dimensions and functional capabilities as described in ASTM F 1166. The dimensions for a person wearing an immersion suit correspond to the arctic-clothed dimensions of ASTM F 1166.

(2) *Visibility from operator's station.*

(i) The operator's station must be designed such that the operator, when seated at the control station, has visibility 360 degrees around the rescue boat, with any areas obstructed by the rescue boat structure or its fittings visible by moving the operator's head and torso.

(ii) The operator, while still being able to steer and control the speed of the rescue boat, must be able to see the water—

(A) Over a 90 degree arc within 3 m (10 ft) of each side of the rescue boat;

(B) Over a 30 degree arc within 1 m (3 ft, 3 in) of each side of the rescue boat; and

(C) Within 0.5 m (1 ft, 8 in) of the entrances designated for recovering persons from the water.

(iii) In order to see a person in the water during recovery or docking operations, a hatch must be provided in fully enclosed rescue boats so that the operator can stand with his or her head outside the rescue boat for increased visibility, provided the operator can still steer and control the speed of the rescue boat.

(3) *Construction.* Each major rigid structural component of each rescue boat must be constructed of steel, aluminum, or Fiber Reinforced Plastic (FRP), or materials accepted by the Commandant as equivalent or superior.

(i) *General.* Metals in contact with each other must be either galvanically compatible or insulated with suitable non-porous materials. Provisions must also be made to prevent loosening or tightening resulting from differences of thermal expansion, freezing, buckling of parts, galvanic corrosion, or other incompatibilities.

(ii) *Steel.* Sheet steel and plate must be low carbon, commercial quality, either corrosion resistant or galvanized as per ASTM A 653, coating designation G90 (incorporated by reference, see § 160.156–5). Structural steel plates and shapes must be carbon steel as per ASTM A 36 (incorporated by reference, see § 160.156–5), or an equivalent or superior steel accepted by the Commandant. All steel products, except corrosion resistant steel, must be galvanized to provide high quality zinc coatings suitable for the intended service life in a marine environment. Corrosion resistant steel must be a standard 302 stainless steel or have equal or superior corrosion resistant characteristics.

(iii) *Aluminum.* Aluminum and aluminum alloys must conform to ASTM B 209 (incorporated by reference, see § 160.156–5) and be high purity for good marine corrosion resistance, free of iron, and containing not more than 0.6 percent copper.

(iv) *Fiber Reinforced Plastic (FRP).*

(A) *Resin.* Any resin used for the hull, canopy, hatches, rigid covers, and enclosures for the engine, transmission, and engine accessories, must be fire retardant and accepted by the Commandant in accordance with 46 CFR part 164, subpart 164.017.

(B) *Glass reinforcement.* Any glass reinforcement used must have good laminated wet strength retention and must meet the appropriate specification in this paragraph. Glass cloth must be a

finished fabric woven from “E” electrical glass fiber yarns meeting ASTM D 4029–09 commercial style designation 1564 (incorporated by reference, see § 160.156–5). Woven roving must conform to MIL–C–19663D, (incorporated by reference, see § 160.156–5). Other glass materials equivalent or superior in strength, design, wet out, and efficiency will be given consideration on specific request to the Commandant.

(C) *Laminate.* All exposed surfaces of any finished laminate must present a smooth finish, and there must be no protruding surface fibers, open voids, pits, cracks, bubbles, or blisters. The laminate must be essentially free from resin-starved or overimpregnated areas, and no foreign matter must remain in the finished laminate. The entire laminate must be fully cured and free of tackiness, and must show no tendency to delaminate, peel, or craze in any overlay. The laminate must not be released from the mold until a Barcol hardness reading of not less than 40–55 is obtained from at least 10 places on the non-gel coated surface, including all interior inner and outer hull surfaces and built-in lockers. The mechanical properties of the laminate must meet the requirements for a Grade 3 laminate as specified in Table I of MIL–P–17549D(SH) (incorporated by reference, see § 160.156–5). Other grades will be given consideration on specific request to the Commandant.

(4) *Welding.* Welding must be performed by welders certified by the Commandant, American Bureau of Shipping, U.S. Navy, or an independent laboratory accepted by the Commandant. Only electrodes intended for use with the material being welded may be used. All welds must be checked using appropriate non-destructive tests.

(5) *Rescue boat buoyancy.* (i) The buoyancy material must be accepted by the Commandant as meeting the performance requirements of IMO Revised recommendation on testing, Part 1, 6.2.2 to 6.2.7, with a density of $32 \pm 8 \text{ kg/m}^3$ ($2 \pm 0.5 \text{ lb/ft}^3$). The buoyancy foam or rescue boat manufacturer must certify the results of the testing to IMO Revised recommendation on testing, Part 1, 6.2.2 to 6.2.7 and submit those results to the Commandant. A list of accepted buoyancy foams may be obtained from the Commandant upon request.

(ii) All voids in the hull and canopy required to provide buoyancy for positive stability and self righting must be completely filled with Coast Guard-accepted buoyancy material.

(iii) Air in the inflated collar of a rigid-hull inflatable rescue boat will not

be considered inherently buoyant material for the purposes of meeting the additional 280 N/person requirement of the LSA Code, Chapter IV/4.4.4.

(6) *Coated fabric.* Any coated fabric used in the construction of inflatable chambers on a rescue boat must be shown to have been subjected to the criteria listed in IMO MSC Circ. 980 for Inflation Chamber Characteristics Test (incorporated by reference, see § 160.156–5) by meeting the requirements of ISO 15372 (incorporated by reference, see § 160.156–5). The color of the finished fabric must be vivid reddish orange color number 12197 of FED–STD–595C (incorporated by reference, see § 160.156–5), or a durable fluorescent color of a similar hue. Each seam must be at least as strong as the weakest of the materials joined by the seam. Each seam must be covered with tape where necessary to prevent lifting of and damage to fabric edges.

(7) *Engines.* (i) In order to be accepted by the Commandant, any spark ignition engine fitted to an approved rescue boat must meet the U.S. Environmental Protection Agency emission requirements in 40 CFR part 91 or part 1045, as applicable, or for a compression ignition engine the requirements in 40 CFR part 89, part 94, or part 1042, as applicable, and have reports containing the same information as recommended by MSC Circ. 980 (incorporated by reference, see § 160.156–5) certified and witnessed by a U.S. Coast Guard inspector or an independent laboratory.

(ii) A hydraulic system, if used to start the engine, must be in accordance with 46 CFR part 58, subpart 58.30, with hose and fittings in accordance with 46 CFR part 56, subpart 56.60 except that—

(A) Push-on type fittings such as Aeroquip 1525–X, 25156–X, and FC332–X are not permitted; and

(B) The length of nonmetallic flexible hose is limited to 760 mm (30 in). Longer nonmetallic flexible hoses may be allowed in emergency steering systems at the discretion of the Commandant.

(iii) If a hand pump is provided, or if the engine has a manual starting system, adequate space must be provided for the hand pump or hand start operation.

(8) *Fuel system.* (i) The fuel system must meet 46 CFR 56.50–75(b) and, except as specified in this paragraph, the fuel tank must meet 46 CFR 58.50–10.

(ii) The fuel tank and fuel system must be in accordance with paragraph (A), (B), or (C) of this paragraph, as follows:

(A) Permanently installed fuel systems must meet the requirements in 46 CFR 160.135–7.

(B) Portable fuel systems for outboard engines must meet UL 1185 (incorporated by reference, see § 160.156–5) or equivalent, except that hoses must be Coast Guard Type A per SAE J1527 (incorporated by reference, see § 160.156–5), and hose clamps, primers, filters, and strainers must be successfully tested in accordance with 33 CFR 183.590. Anti-siphon devices must be provided in the fuel system to prevent fuel spillage when the hose is disconnected. Arrangements must be provided to secure the fuel tank in its normal operating position on the rescue boat.

(C) Fuel systems for outboard engines using non-integral, permanently installed fuel tanks must meet the requirements of 33 CFR part 183, subpart J—Fuel Systems. UL 1102 (incorporated by reference, see § 160.156–5) meets these requirements for fuel tanks.

(9) *Starting system batteries.* Each battery fitted in a totally enclosed rescue boat must be stored in a sealed compartment with exterior venting. If the rescue boat has more than one engine, then only one starting battery is required per engine.

(10) *Exhaust.* Engine exhaust must be routed away from bilge and potential oil drips. Any paint used on engines, manifolds, or exhaust must not give off fumes when heated. All exhaust lagging must be non-absorbent.

(11) *Propeller guard.* Each propeller on a rescue boat must be fitted with a propeller guard with a maximum opening of 76 mm (3 in) on all sides on which a person is likely to be exposed.

(12) *Control and steering station.* Rescue boat starting, maneuvering, and steering controls must be provided at the control and steering station.

(i) The throttle must be a continuous manual control and must be able to be set and locked at any position.

(ii) The control and steering station must be designed and laid out in accordance with ASTM F 1166 sections 9 and 10, so that controls and displays are unambiguous, accessible, and easy to reach and use from the operator's normal seated position, while wearing an immersion suit or a lifejacket.

(iii) Each control, gauge, or display must be identified by a marking posted on, above, or adjacent to the respective item. Each control must operate in a logical manner and be marked with an arrow to show direction of movement of control which will cause an increased response. Each gauge must be marked with the normal operating range and

indicate danger or abnormal conditions. Each marking must be permanent and weatherproof.

(iv) Gauges, and audio and visual alarms, must be provided to monitor at least the following parameters on inboard engines—

(A) Coolant temperature, for a liquid cooled engine;

(B) Oil pressure, for an engine with an oil pump;

(C) Tachometer, for an engine not provided with over-speed protection; and

(D) State of charge, or rate of charge, for each rechargeable engine starting power source.

(13) *Drain plug.* The position of each drain plug must be clearly indicated by a permanent marking inside the lifeboat. The marking must be an arrow pointing in the direction of the plug, and the words "DRAIN PLUG" must be 76 mm (3 in) high and have letters of a color that contrast with their background. The marking must be clearly visible to a person within the vicinity of the drain plug.

(14) *Remote steering.* The procedure to change over from remote to local steering must be simple, not require the use of tools, and be clearly posted. There must be sufficient clear space to install, operate, remove, and stow the removable tiller arm. The tiller arm and its connection to the rudder stock must be of sufficient strength so that there is no slippage or bending of the tiller arm. Rudder stops or other means must be provided to prevent the rudder from turning too far on either side.

(15) *Lifelines.* Buoyant lifelines must be of ultraviolet resistant material.

(16) *Rails provided as handholds.* Rails provided as handholds on rigid and rigid-inflated rescue boats must extend for half the length of the rescue boat on both sides of the hull, and the clearance between the rail and hull must be at least 38 mm (1.5 in). The rails must be attached to the hull below the chine or turn of the bilge, must be faired to prevent any fouling, and not project beyond the widest part of the rescue boat.

(17) *Equipment list.* A weatherproof equipment list must be permanently mounted in a conspicuous and prominent location on a stowage locker or compartment, or on inside of canopy. The list must include a stowage plan oriented such that the stowage location of each item of loose equipment is readily apparent.

(18) *Release mechanism.* Each release mechanism fitted to a rescue boat, including a fast rescue boat, must be identified at the application for approval of the prototype rescue boat

and must be approved under 46 CFR part 160, subparts 160.133 or 160.170. The release lever or control must be red in color, and the area immediately surrounding the control must be a sharply contrasting light color. An illustrated operating instruction plate or placard, showing the correct off-load and emergency on-load release procedure and recovery procedure, must be posted so that it is visible and legible from the helmsman's normal operating position. The plate or placard must be corrosion resistant and weatherproof and must be marked with the word "DANGER".

(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), 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).

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

§ 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 lifeboat 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 lifeboat 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.

§ 160.156-11 Fabrication of prototype 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 conduct 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 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). 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). The flexural ultimate strength must be determined by ASTM D 790 method I (test condition “A”, flatwise, dry) or the corresponding ISO 14125 test method (incorporated by reference, see § 160.156–5). The tensile strength, lengthwise, must be determined as per ASTM D 638 or ISO 527 (incorporated by reference, see § 160.156–5).

(C) Each major FRP component, such as the hull, canopy, and inner liner(s) of each prototype FRP rescue boat, must be examined and weighed after it is completed but before it is assembled. If the rescue boat is constructed by the spray lay-up technique, the hull and canopy thicknesses must be measured using ultrasonic or equivalent techniques.

(ii) *Steel construction.* Steel sheet and plate used for the hull, floors, and other structural components of a prototype steel rescue boat must meet the bend tests requirement specified under ASTM A 653 (incorporated by reference, see § 160.156–5) after galvanizing or other anti-corrosion treatment has been applied. This may be demonstrated through supplier’s certification papers or through witnessing actual tests.

(iii) *Welding.* Structural components of each prototype rescue boat joined by welding must be joined by the welding procedures and materials per the plans reviewed under § 160.156–9 of this subpart and by welders appropriately qualified.

(iv) *Buoyancy material.* If block foam buoyancy material is used, each piece must be weighed after it is cut and shaped to make sure that the correct amount of foam is installed. If foamed-in-place buoyancy material is used, a separate sample of the foam must be poured, and used to make a density determination after it has set. The density must be $32 \pm 8 \text{ kg/m}^3$ ($2 \pm 0.5 \text{ lb/ft}^3$). Each major subassembly such as the hull-with-liner and canopy-with-liner must be weighed after the buoyancy foam is installed and before it is further assembled.

(v) *Coated fabric.* Coated fabric for inflatable collars used in the construction of each rescue boat must meet the requirements specified under § 160.156–7(b)(3) of this subpart. This

may be demonstrated through a supplier’s certification papers or through witnessing actual tests.

(vi) *Installation of the propulsion system.*

(vii) *Installation of the steering system.*

(3) The independent laboratory must submit the inspection report to the Commandant.

§ 160.156–13 Approval inspections and tests for prototype rescue boats.

(a) After the Commandant notifies the manufacturer that the prototype rescue boat is in compliance with the requirements of § 160.156–11 of this subpart, the manufacturer may proceed with the prototype approval inspections and tests required under this section. The prototype rescue boat, the construction of which was witnessed under § 160.135–11 of this part, must be used for the tests in this section.

(b) Except as provided in paragraph (f) of this section, the Coast Guard must conduct the approval inspections and witness the approval tests required under this section.

(c) *Manufacturer requirements.* To proceed with approval inspections and tests required by this section, the manufacturer must—

(1) Notify the Commandant and cognizant Officer in Charge, Marine Inspection (OCMI) of where the approval inspections and tests required under this section will take place, and such notification must be in sufficient time to allow making travel arrangements;

(2) Arrange a testing schedule that allows for a Coast Guard inspector to travel to the site where the testing is to be performed;

(3) Admit the Coast Guard inspector to any place where work or testing is performed on rescue boats or their component parts and materials for the purpose of—

(i) Conducting inspections as necessary to determine that the prototype is constructed by the methods and with the materials specified in the plans reviewed under § 160.156–9, and the inspection report under § 160.156–11, of this subpart;

(ii) Assuring that the quality assurance program of the manufacturer is satisfactory;

(iii) Witnessing tests; and

(iv) Taking samples of parts or materials for additional inspections or tests; and

(4) Make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of rescue boats, together with records identifying the lot

or serial numbers of the rescue boats in which such materials were used.

(d) *Tests*—(1) *Prototype rescue boat readiness*. All tests must be conducted on a completely outfitted rescue boat, including fixed equipment such as a compass, searchlight, and navigating lights. Loose equipment may be substituted by weights.

(2) *FRP prototype rescue boat lay-up*. For the prototype of each design of an FRP rescue boat, the lay-up must be made of unpigmented resins and clear gel coat.

(3) *Fuel tank*. Each non-portable fuel tank must be tested by a static head above the tank top of 3 m (10 ft) of water without showing any leaks or signs of permanent distortion.

(4) *IMO Revised recommendation on testing*. Each prototype rescue boat of each design must pass each of the tests for the applicable hull type described in the IMO Revised recommendation on testing, Part 1, section 7 (incorporated by reference, see § 160.156–5). Tests must be conducted in accordance with these paragraphs of IMO Revised recommendation on testing, Part 1, with the following modifications:

(i) *Fire retardancy/release mechanism and engine tests* (Paragraphs 1/6.2, 6.9, 6.10, 6.14). The tests in the following IMO Revised recommendation on testing paragraphs may be accomplished independent of the rescue boat, and may be considered completed and need not be repeated if the tests have been previously shown to meet the following necessary requirements—

(A) Paragraphs 6.9.3 through 6.9.6;

(B) Paragraphs 6.10.2 through 6.10.6; and

(C) Paragraphs 6.14.6 through 6.14.8.

(ii) *Impact test* (Paragraph 1/6.4). The rigid vertical surface must not be displaced or deformed as a result of the test.

(iii) *Flooded stability test for rigid rescue boats only* (Paragraph 1/6.8). Any materials used to raise the test weights representing the rescue boat occupants above the seat pan must be at least as dense as fresh water.

(iv) *Rescue boat operational test, operation of engine* (Paragraph 1/7.1.5). For the 4-hour rescue boat maneuvering period, the rescue boat must not (except for a short period to measure towing force and to demonstrate towing fixture durability) be secured, and must be run through its full range of speeds and full range of all controls throughout the period.

(v) *Survival recovery test* (Paragraph 1/6.10.8). The recovery demonstration must show that no more than two crewmembers are required to recover a helpless person of ninety-fifth

percentile by weight described in ASTM F 1166 (incorporated by reference, see § 160.156–5) while the crewmembers and helpless person are each wearing a lifejacket.

(vi) *Rescue boat seating space test* (Paragraph 1/7.1.3). The average mass of persons used to test the rescue boat seating space must be determined by weighing as a group or individually. Each person must wear an inherently buoyant SOLAS lifejacket with at least 150 N of buoyancy or a Coast Guard-approved lifejacket approved under approval series 160.155. The operator(s) must demonstrate that the rescue boat can be operated while wearing a Coast Guard approved, insulated-buoyant immersion suit approved under approval series 160.171. The Commandant will give consideration to requests to test at, and designate rescue boats for, a heavier occupant weight than that stated in the IMO LSA Code, Chapter V (incorporated by reference, § 160.156–5).

(5) *Visual inspection*. Each rescue boat must be visually inspected to confirm—

(i) Compliance with this subpart;

(ii) Conformance with the plans reviewed under § 160.156–9 of this subpart; and

(iii) Ease of operation and maintenance.

(e) *Test waiver*. The Commandant may waive certain tests for a rescue boat identical in construction to smaller and larger rescue boats that have successfully completed the tests. Tests associated with rescue boat components that have already been approved by the Commandant are not required to be repeated.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness approval tests required by this section so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005–9(a)(5) by preparing and submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, see § 160.156–5). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as

permitted by paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final plans of the rescue boat as built. The plans must include, in triplicate—

(i) The instructions for training and maintenance described in §§ 160.156–19 and 160.156–21 of this subpart; and

(ii) The final version of the plans required under § 160.156–9 of this subpart.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and, if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005–13.

§ 160.156–15 Production inspections, tests, quality control, and conformance of rescue boats.

(a) Unless the Commandant directs otherwise, an independent laboratory must conduct inspections, tests, and oversight required by this section. Production inspections and tests of rescue boats 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 production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer's responsibility*. The manufacturer must—

(1) Institute a quality control procedure to ensure that all production rescue boats are produced to the same standard, and in the same manner, as the prototype rescue boat approved by the Commandant. The manufacturer's quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) to ensure that all tests are performed as described in this section;

(3) Submit to the Commandant, a yearly report that contains the following—

(i) Serial number and date of final assembly of each rescue boat constructed;

(ii) Name of the representative of the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section); and

(iii) Name of the vessel and company receiving the rescue boat, if known;

(4) Ensure that the arrangement and materials entering into the construction of the rescue boat are in accordance with plans approved under § 160.156–13(h) of this subpart;

(5) Allow an independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) access to any place where materials are stored for the rescue boat, work or testing is performed on rescue boats or their component parts and materials, or records are retained to meet the requirements of paragraph (c) of this section, for the purpose of—

(i) Assuring that the quality control program of the manufacturer is satisfactory;

(ii) Witnessing tests; or

(iii) Taking samples of parts or materials for additional inspections or tests; and

(6) Ensure that the independent laboratory conducts the inspections and witnesses the tests required by paragraph (e) of this section, and further conducts a visual inspection to verify that the rescue boats are being made in accordance with the plans approved under § 160.156–13(h) of this subpart and the requirements of this subpart.

(c) *Recordkeeping.* The manufacturer must maintain records in accordance with 46 CFR 159.007–13. The manufacturer must keep records of all items listed in this section for at least 5 years from the date of termination of approval of each rescue boat. The records must include—

(1) A copy of this subpart, other CFR sections referenced in this subpart, and each applicable document listed in § 160.156–5 of this subpart;

(2) A copy of approved plans, documentation, and certifications;

(3) A current certificate of approval for each approved rescue boat;

(4) Affidavits, certificates, or invoices from the suppliers identifying all essential materials used in the production of approved rescue boats, together with records identifying the serial numbers of the rescue boats in which such materials were used;

(5) Start and finish date and time of the lay-up of each major Fiber Reinforced Plastic (FRP) component such as the hull, canopy, and inner liner and the names of the operator(s);

(6) Start and finish date and time of pouring of foam-in-place rigid buoyancy foam, and name of operator(s);

(7) Records of all structural welding and name of operator(s);

(8) Records of welder certificates, training and qualifications;

(9) Date and results of calibration of test equipment and the name and

address of the company or agency that performed the calibration;

(10) The serial number of each production rescue boat, along with records of its inspections and tests carried out under this section; and

(11) The original purchaser of each rescue boat and the vessel on which it was installed, if known.

(d) *Independent laboratory responsibility.* The independent laboratory must perform or witness the inspections and tests under paragraph (e) in this section for each Coast Guard-approved rescue boat to be installed on a U.S.-flagged vessel. If the manufacturer also produces rescue boats for approval by other maritime safety administrations, the inspections may be coordinated with inspection visits for those administrations.

(e) *Production inspections and tests.* Each approved rescue boat must be inspected and tested in accordance with each of the following procedures:

(1) *In-process inspections and tests.* In accordance with the interval prescribed in paragraph (d)(1) of this section, each production rescue boat must be examined during lay-up of the hull to verify that the lay-up conforms to the approved drawings. Each FRP major component, such as the hull, canopy, and inner liner, must be examined and weighed after it is completed but before assembled. If the rescue boat is constructed by the spray lay-up technique, the hull and canopy thicknesses must be measured using ultrasonic or equivalent techniques. Laboratory tests of laminates must be conducted at this time. Test samples must be cut out from the rescue boat itself 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 described in the applicable test specified in this paragraph.

(i) *Weight.* The weight of each FRP section, such as hull, canopy, and inner liner, must be within 10 percent of similar sections of the prototype rescue boat. These weights must be the bare laminate weights. Backing plates that are molded into the laminate may be included.

(ii) *Thickness.* The average thickness of each section of sprayed-up laminate must be within 20 percent of the corresponding sections of the prototype.

(iii) *Resin content.* Laminate samples from the hull, canopy, and inner liners must be tested in accordance with ASTM D 2584 or ISO 1172 (incorporated by reference, see § 160.156–5). The resin content must be

within 8 percentage points of the prototype results. If the resin content does not comply, flexural ultimate strength and tensile tests in paragraph (e)(1)(iv) of this section must be conducted.

(iv) *Flexural ultimate strength and tensile tests.* Each laminate sample from each major component, such as hull and liner, that does not comply with the resin content requirement in paragraph (e)(1)(iii) of this section, and from each component of every fifth production rescue boat, must be subjected to the flexural ultimate strength and tensile strength tests as described in § 160.156–11(c)(2)(i)(B) of this subpart. The values must be at least 90 percent of the prototype results.

(v) *Buoyancy material.* If block foam buoyancy material is used, each piece must be weighed after it is cut and shaped to make sure that the correct amount of foam is installed. If foamed-in-place buoyancy material is used, a separate sample of the foam must be poured, and used to make a density determination after it has set. The density must be $32 \pm 8 \text{ kg/m}^3$ ($2 \pm 0.5 \text{ lb/ft}^3$).

(vi) *Steel sheet and plate.* Steel sheet and plate for the hull, floors, and other structural components must meet ASTM A 36 and ASTM A 653 as applicable (incorporated by reference, see § 160.156–5). Non-corrosive resistant steel must meet the coating mass and bend tests requirement specified under ASTM A 653. Compliance for this paragraph can be ascertained through supplier's certification papers or through conducting actual tests.

(vii) *Fabric.* The coated fabric for inflatable collars, when used, for the construction of each rescue boat must meet ISO 15372 (incorporated by reference, see § 160.156–5). This compliance can be ascertained through a supplier's certification papers or through witnessing actual tests.

(viii) *Fuel tank.* Each fuel tank must be tested by a static head above the tank top of 3 m (10 ft) of water without showing any leaks or signs of permanent distortion.

(ix) *Welding.* It must be determined that structural components joined by welding was performed by welders who are appropriately qualified and that the welding procedure and materials are as per the plans approved under § 160.156–13(h) of this subpart.

(2) *Post assembly tests and inspections.* The finished rescue boat must be visually inspected inside and out. The manufacturer must develop and maintain a visual inspection checklist designed to ensure that all applicable requirements have been met

and the rescue boat is equipped in accordance with approved plans. At a minimum, each rescue boat must be operated for 2 hours, during which all rescue boat systems must be exercised.

§ 160.156–17 Marking and labeling.

(a) Each rescue boat must be marked with a plate or label permanently affixed to the hull in a conspicuous place readily accessible for inspection and sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the rescue boat.

(b) The plate or label must be in English, but may also be in other languages.

(c) The plate or label must contain the—

(1) Name and address of the manufacturer;

(2) Manufacturer's model identification;

(3) Name of the independent laboratory that witnessed the prototype or production tests;

(4) Serial number of the rescue boat;

(5) U.S. Coast Guard approval number;

(6) Month and year of manufacture;

(7) Material of hull construction;

(8) Number of persons for which the rescue boat is approved;

(9) Light load and full load (condition A and condition B weight); and

(10) Word "SOLAS."

§ 160.156–19 Operating instructions and information for the ship's training manual.

(a) Each rescue boat must have instructions and information for the ship's training manual, that use the symbols from IMO Res. A.760(18) (incorporated by reference, see § 160.156–5) to describe the location and operation of the rescue boat.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

(c) The rescue boat manufacturer must make the instructions and information required by paragraph (a) of this section available—

(1) In English to purchasers of a rescue boat approved by the Coast Guard; and

(2) In the form of an instruction placard providing simple procedures and illustrations for operation of the rescue boat. The placard must be not greater than 36 cm (14 in) by 51 cm (20 in), and must be made of durable material and suitable for display near installations of rescue boats on vessels.

§ 160.156–21 Operation and maintenance instructions.

(a) In order to comply with SOLAS, each rescue boat must have operation and maintenance instructions that—

(1) Follows the general format and content specified in MSC.1 Circ. 1205 (incorporated by reference, see § 160.156–5); and

(2) Includes a checklist for use in monthly, external inspections of the rescue boat.

(b) The rescue boat manufacturer must make the manual required by paragraph (a) of this section available in English to purchasers of a rescue boat approved by the Coast Guard.

(c) The operation and maintenance instructions required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

§ 160.156–23 Procedure for approval of design, material, or construction change.

(a) Each change in design, material, or construction from the plans approved under 46 CFR 159.005–13 and § 160.156–13(h) of this subpart must be approved by the Commandant before being used in any production rescue boat. The manufacturer must submit any such change following the procedures set forth in § 160.156–9 of this subpart, but documentation on items that are unchanged from the plans approved under 46 CFR 159.005–13 and § 160.156–13(h) of this subpart need not be resubmitted.

(b) Unless determined by the Commandant to be unnecessary, a prototype rescue boat with each change described in paragraph (a) of this section must be made and tested according to the procedures for new approvals in §§ 160.156–9 through 160.156–13 of this subpart.

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

45. Add subpart 160.170 to read as follows:

Subpart 160.170—Davit-Launched Liferaft Automatic Release Hooks (SOLAS)

Sec.

160.170–1 Scope.

160.170–3 Definitions.

160.170–5 Incorporation by reference.

160.170–7 Design, construction, and performance of release mechanisms.

160.170–9 Preapproval review.

160.170–11 [Reserved]

160.170–13 Approval inspections and tests for prototype release mechanisms.

160.170–15 Production inspections, tests, quality control, and conformance of release mechanisms.

160.170–17 Marking and labeling.

160.170–19 Operating instructions and information for the ship's training manual.

160.170–21 Operation and maintenance instructions.

160.170–23 Procedure for approval of design, material, or change.

Subpart 160.170—Davit-Launched Liferaft Automatic Release Hooks (SOLAS)

§ 160.170–1 Scope.

This subpart prescribes standards, tests, and procedures for seeking Coast Guard approval of an automatic release mechanism complying with SOLAS and the IMO LSA Code, for use with davit-launched liferafts approved under 46 CFR part 160, subparts 160.051 or 160.151, and single-fall rescue boats approved under 46 CFR part 160, subpart 160.156.

§ 160.170–3 Definitions.

In addition to the definitions in the IMO LSA Code (incorporated by reference, see § 160.170–5), in this subpart, the term:

Commandant means the Commandant (CG–5214), U.S. COAST GUARD, 2100 2ND ST SW., STOP 7126, WASHINGTON, DC 20593–7126.

Full load means the weight of the complete rescue boat including all required equipment, provisions, fuel (if applicable), and the number of persons for which it is approved. This is also known as the "condition B" weight.

Independent laboratory has the same meaning as 46 CFR 159.001–3. A list of accepted independent laboratories is available from the Commandant and online at <http://cgmix.uscg.mil>.

Light load means the weight of the complete rescue boat empty and does not include fuel, required equipment, or the equivalent weight of persons. This is also known as the "condition A" weight.

Officer In Charge, Marine Inspection (OCMI) means an officer of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in part 1 of this chapter, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The "cognizant OCMI" is the OCMI who has immediate jurisdiction over a vessel for the purpose of performing the duties previously described.

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.

§ 160.170–5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal-register/code_of_federal_regulations/ibr_locations.html. Also, it is available for inspection at COMMANDANT (CG–5214), U.S. COAST GUARD, 2100 2ND ST., SW., STOP 7126, WASHINGTON, DC 20593–7126 and is available from the sources indicated in this section.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428–2959.

(1) ASTM A 36/A 36M–08 Standard Specification for Carbon Structural Steel, IBR approved for § 160.170–7 (“ASTM A 36”).

(2) ASTM A 653/A 653M–08 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, IBR approved for §§ 160.170–7, 160.170–13, and 160.170–15 (“ASTM A 653”).

(3) ASTM F 1166–07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities, IBR approved for § 160.170–7 (“ASTM F 1166”).

(c) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) IMO Resolution A.760(18), Symbols Related to Life-Saving Appliances and Arrangements, IBR approved for § 160.170–19 (“IMO Res. A.760(18)”).

(2) IMO Resolution MSC.81(70), IMO Revised recommendation on testing of life-saving appliances, as amended by IMO Resolutions MSC.226(82) and MSC.274(85), IBR approved for §§ 160.170–7, 160.170–13, and 160.170–15 (“Revised recommendation on testing”).

(3) IMO Resolution MSC.48(66), International Life-Saving Appliance Code, as amended by IMO Resolutions MSC.207(81), MSC.218(82), and MSC.272(85), IBR approved for § 160.170–7 (“IMO LSA Code”).

(4) MSC Circular 980, Standardized life-saving appliance evaluation and test

report forms, IBR approved for § 160.170–13 (“IMO MSC Circ. 980”).

(5) MSC.1 Circular 1205, Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems, IBR approved for § 160.170–21 (“IMO MSC.1 Circ. 1205”).

§ 160.170–7 Design, construction, and performance of release mechanisms.

(a) To seek Coast Guard approval of a release mechanism, a manufacturer must comply with, and each release mechanism must meet, the requirements of the following—

(1) IMO LSA Code, Chapter VI/6.1.5 (incorporated by reference, see § 160.170–5);

(2) IMO Revised recommendation on testing Part 1/8.2 (incorporated by reference, see § 160.170–5).

(3) 46 CFR part 159; and

(4) This subpart.

(b) Each release mechanism must meet the following requirements—

(1) *Design*. All functions of the release mechanism, including removal of interlocks, operation of the release handle, resetting the hooks, and reattaching the falls to the hooks, must be designed to be operable by persons wearing immersion suits;

(2) Each release mechanism should be designed following standard human engineering practices described in ASTM F 1166 (incorporated by reference, see § 160.170–5). Design limits should be based on a range from the fifth percentile female to the ninety-fifth percentile male values for critical body dimensions and functional capabilities as described in ASTM F 1166. The dimensions for a person wearing an immersion suit correspond to the arctic-clothed dimensions of ASTM F 1166;

(3) *Steel*. Each major structural component of each release mechanism must be constructed of steel. Other materials may be used if accepted by the Commandant as equivalent or superior. Sheet steel and plate must be low-carbon, commercial quality, either corrosion resistant or galvanized as per ASTM A 653 (incorporated by reference, see § 160.170–5), coating designation G115. Structural steel plates and shapes must be carbon steel as per ASTM A 36 (incorporated by reference, see § 160.170–5). All steel products, except corrosion resistant steel, must be galvanized to provide high-quality zinc coatings suitable for the intended service life in a marine environment. Each fabricated part must be galvanized after fabrication. Corrosion resistant steel must be a standard 302 stainless steel or have equal or superior corrosion resistant characteristics;

(4) *Welding*. Welding must be performed by welders certified by the Commandant, American Bureau of Shipping, U.S. Navy, or an independent laboratory accepted by the Commandant. Only electrodes intended for use with the material being welded may be used. All welds must be checked using appropriate non-destructive tests;

(5) Metals in contact with each other must be either galvanically compatible or insulated with suitable non-porous materials. Provisions must also be made to prevent loosening or tightening resulting from differences of thermal expansion, freezing, buckling of parts, galvanic corrosion, or other incompatibilities;

(6) Screws, nuts, bolts, pins, keys, and other similar hardware, securing moving parts must be fitted with suitable lock washers, cotter pins, or locks to prevent them from coming adrift;

(7) The on-load operation of the release mechanism must require two separate, deliberate actions by the operator;

(8) To prevent an accidental release during recovery of the boat, the release hooks must not be able to carry any weight until the release mechanism is properly reset;

(9) The release and recovery procedures must be included as an illustrated operation instruction plate or placard. The plate or placard must be corrosion resistant and weatherproof and must be marked with the word “DANGER”. The illustrations must correspond exactly to those used in the instruction and maintenance manual provided by the manufacturer;

(10) The release lever or control must be red in color, and the area immediately surrounding the control must be a sharply contrasting light color;

(11) Each load carrying part of the release mechanism, including its connection to the boat, must be designed with a safety factor of six based on the ultimate strength of the materials used;

(12) The release lever and its connection to the release mechanism must be of sufficient strength so that there is no deformation of the release lever or the release control assembly during on-load release;

(13) Positive means of lubrication must be provided for each bearing which is not permanently lubricated. Points of lubrication must be so located that they are clearly visible and accessible in the installed position in the boat;

(14) A hydraulic system, if used to activate the release mechanism, must be in accordance with 46 CFR part 58,

subpart 58.30, with hose and fittings in accordance with 46 CFR part 56, subpart 56.60, except that—

- (i) Push-on type fittings such as Aeroquip 1525-X, 25156-X, and FC332-X are not permitted;
- (ii) The length of nonmetallic flexible hose is limited to 760 mm (30 in); and
- (iii) If a hand pump is provided, adequate space must be provided for the hand pump or hand operation.

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

§ 160.170-9 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 release mechanism, 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) Stress calculations for all load carrying parts, including the release hooks, release mechanisms, and connections;
- (4) Hydraulic systems drawings and specifications, if installed;
- (5) Drawings of all signs and placards showing actual inscription, format, color, and size;
- (6) An operation, maintenance, and training manual as described in §§ 160.170-19 and 160.170-21 of this subpart;
- (7) A description of the quality control procedures and recordkeeping that will apply to the production of the release mechanism, 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 and joints, including welding inspection procedures; and

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

(8) Full details of any other unique capability;

(9) Any other drawing(s) necessary to show that the release mechanism complies with the requirements of this subpart;

(10) The location or address of all manufacturing sites, including the name and address of any subcontractors, where the release mechanism will be constructed; and

(11) The name of the independent laboratory that will perform the duties prescribed in § 160.170-15 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 release mechanism meets the construction requirements of this subpart;

(3) Accurately depict the proposed automatic release hook;

(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.

§ 160.170-11 [Reserved]

§ 160.170-13 Approval inspections and tests for prototype release mechanisms.

(a) If the manufacturer is notified that the information submitted in accordance with § 160.170-9 of this subpart is satisfactory to the Commandant, the manufacturer may proceed with fabrication of the prototype release mechanism, and the

approval inspections and tests required under this section.

(b) Except as provided in paragraph (f) of this section, the Coast Guard must conduct the approval inspections and witness the approval tests required under this section.

(c) *Manufacturer's requirements.* To proceed with approval inspections and tests required by this section, the manufacturer must—

(1) Notify the Commandant and cognizant Officer in Charge, Marine Inspection (OCMI) of where the approval inspections and tests required under this section will take place, and such notification must be in sufficient time to allow making travel arrangements;

(2) Arrange a testing schedule that allows for a Coast Guard inspector to travel to the site where the testing is to be performed;

(3) Admit the Coast Guard inspector to any place where work or testing is performed on release mechanisms or their component parts and materials for the purpose of—

(i) Conducting inspections as necessary to determine that the prototype—

(A) Conforms with the plans reviewed under § 160.170-9 of this subpart;

(B) Is constructed by the methods and with the materials specified in the plans reviewed under § 160.170-9 of this subpart; and

(C) When welding is part of the construction process, is constructed by the welding procedure and materials as per the plans reviewed under § 160.170-9 of this subpart, and the welders are appropriately qualified;

(ii) Assuring that the quality-assurance program of the manufacturer is satisfactory;

(iii) Witnessing tests; and

(iv) Taking samples of parts or materials for additional inspections or tests; and

(4) Make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of release mechanisms, together with records identifying the lot or serial numbers of the release mechanisms in which such materials were used.

(d) *Tests*—(1) *Prototype release mechanism readiness.* All tests must be conducted on a complete release mechanism.

(2) *IMO Revised recommendation on testing.* Each prototype release mechanism of each design must pass each of the tests described in IMO Revised recommendation on testing, Part 1, paragraph 8.2 (incorporated by reference, see § 160.170-5). Tests must

be conducted in accordance with these paragraphs of IMO Revised recommendation on testing, Part 1, with the following modifications:

(i) *Visual inspection.* Each release mechanism must be visually inspected to confirm—

(A) Compliance with this subpart;

(B) Conformance with the examined plans; and

(C) Ease of operation and maintenance.

(ii) *Materials.* Steel meeting ASTM A 653 (incorporated by reference, see § 160.170–5) must meet the coating mass and bend tests requirement specified under ASTM A 653 after galvanizing or other anti-corrosion treatment has been applied. This compliance can be ascertained through a supplier's certification or by conducting actual tests.

(iii) *Tensile tests.* The release mechanism hook assembly and supporting structure must be tensile tested in a jig built to load the hook assembly in the same way or ways it would be loaded when used with a liferaft or rescue boat. The hook assembly will be approved for a maximum of one-sixth of the highest load applied.

(iv) *Universal joints.* This test is required if the release mechanism employs universal joints to transmit the release power from the control to the hook release. One of each type and size of universal joint must be set up in a jig with the angles of leads set at 0 (zero), 30, and 60 degrees, respectively. A torque of 540 Nm (400 ft lb) must be applied. This torque must be applied with the connecting rod secured beyond the universal and with the lever arm in the horizontal position. There must be no permanent set, or undue stress, as a result of this test.

(v) *Hydraulic controls.* If the release mechanism includes a fluid power and control system, a test of the hydraulic controls must be conducted in accordance with 46 CFR 58.30–35.

(e) *Test waiver.* The Commandant may waive certain tests for a release mechanism identical in construction to smaller and larger release mechanisms that have successfully completed the tests. However, stress calculations in accordance with § 160.170–9(b) of this subpart must still be submitted. Tests associated with release mechanism components that have already been accepted by the Commandant are not required to be repeated.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness approval tests required by this section

so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005–9(a)(5) by preparing and submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, see § 160.170–5). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as permitted by paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final plans of the release mechanism as built. The plans must include, in triplicate, the instructions for training and maintenance described in §§ 160.170–19 and 160.170–21 of this subpart, respectively.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005–13.

§ 160.170–15 Production inspections, tests, quality control, and conformance of release mechanisms.

(a) Unless the Commandant directs otherwise, an independent laboratory must conduct inspections, tests, and oversight required by this section. Production inspections and tests of release mechanisms 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 production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer's responsibility.* The manufacturer must—

(1) Institute a quality control procedure to ensure that all production release mechanisms are produced to the same standard, and in the same manner, as the prototype release mechanism approved by the Commandant. The manufacturer's quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) to ensure that all tests are performed as described in this section;

(3) Submit to the Commandant, a yearly report that contains the following—

(i) Serial number and date of final assembly of each release mechanism constructed;

(ii) The name of the representative of the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section); and

(iii) Serial number and model name of the liferaft or rescue boat with which the release hook is to be used, if known;

(4) Ensure that the arrangement and materials entering into the construction of the release mechanism are in accordance with plans approved under § 160.170–13(h) of this subpart;

(5) Allow an independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) access to any place where materials are stored for the release mechanism, work or testing is performed on release mechanisms or their component parts and materials, or records are retained to meet the requirements of paragraph (c) of this section below, for the purpose of—

(i) Assuring that the quality control program of the manufacturer is satisfactory;

(ii) Witnessing tests; or

(iii) Taking samples of parts or materials for additional inspections or tests; and

(6) Ensure that the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) conducts the inspections and witnesses the tests required by paragraph (e) of this section, and further conducts a visual inspection to verify that the release mechanisms are being made in accordance with the plans approved under § 160.170–13(h) of this subpart and the requirements of this subpart.

(c) *Recordkeeping.* The manufacturer must maintain records in accordance with 46 CFR 159.007–13. The manufacturer must keep records of all items listed in this section for at least 5 years from the date of termination of approval of each release mechanism. The records must include—

(1) A copy of this subpart, other CFR sections referenced in this subpart, and each document listed in § 160.170–5 of this subpart;

(2) A copy of the approved plans and documentation;

(3) A current certificate of approval for each approved release mechanism;

(4) Affidavits, certificates, or invoices from the suppliers identifying all essential materials used in the production of approved release mechanisms, together with records identifying the serial numbers of the release mechanisms in which such materials were used;

(5) Records of all structural welding and name of operator(s);

(6) Records of welder certificates, training, and qualifications;

(7) Date and results of calibration of test equipment and the name and address of the company or agency that performed the calibration;

(8) The serial number of each production release gear, along with records of its inspections and tests carried out under this section; and

(9) The original purchaser of each release gear and the vessel on which it was installed, if known.

(d) *Independent laboratory responsibility.* The independent laboratory must perform or witness the inspections and tests under paragraph (e) below for each Coast Guard-approved release mechanism to be installed on a U.S.-flagged vessel. If the manufacturer also produces release mechanisms for approval by other maritime safety administrations, the inspections may be coordinated with inspection visits for those administrations.

(e) *Production inspections and tests.* Each finished release mechanism must be visually inspected. The manufacturer must develop and maintain a visual inspection checklist designed to ensure that all applicable requirements have been met. Each approved release mechanism constructed with non-corrosion resistant steel must be confirmed to have met the coating mass and bend tests requirement specified under ASTM A 653 (incorporated by reference, see § 160.170-5) after galvanizing or other anti-corrosion treatment has been applied. This compliance can be ascertained through a supplier's certification papers or through conducting actual tests.

(f) Each approved release mechanism must pass each of the tests described in IMO Revised recommendation on testing, Part 2, paragraph 6.2 (incorporated by reference, see § 160.170-5). However, each approved release mechanism for installation of a single-fall rescue boat must pass each of the tests described in IMO Revised recommendation on testing, Part 2, paragraph 5.3.1 and 5.3.4.

§ 160.170-17 Marking and labeling.

(a) Each hook body of a release mechanism must be marked with a plate or label permanently affixed in a conspicuous place readily accessible for inspection and sufficiently durable to withstand continuous exposure to environmental conditions at sea for the life of the release mechanism.

(b) The plate or label must be in English, but may also be in other languages.

(c) The plate or label must contain the—

(1) Manufacturer's name and model identification;

(2) Name of the independent laboratory that witnessed the prototype or production tests;

(3) Serial number of the release mechanism;

(4) U.S. Coast Guard approval number;

(5) Month and year of manufacture;

(6) Safe working load of the release mechanism;

(7) Number of the test certificate in accordance with IMO Revised recommendation on testing, Part 2/6.2.2 (incorporated by reference, see § 160.170-5); and

(8) Word "SOLAS."

§ 160.170-19 Operating instructions and information for the ship's training manual.

(a) In order to comply with SOLAS, each release mechanism must have instructions and information for the ship's training manual that use the symbols from IMO Res. A.760(18) (incorporated by reference, see § 160.170-5) to describe the location and operation of the winch.

(b) The instructions and information required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

(c) The release mechanism manufacturer must make the instructions and information required by paragraph (a) of this section available—

(1) In English to purchasers of release mechanisms approved by the Coast Guard; and

(2) In the form of an instruction placard providing simple procedures and illustrations for operation of the release mechanism. The placard must be not greater than 36 cm (14 in) by 51 cm (20 in), and must be made of durable material and suitable for display inside a lifeboat and rescue boat, and near launching apparatuses on vessels.

§ 160.170-21 Operation and maintenance instructions.

(a) Each release mechanism must have operation and maintenance instructions that—

(1) Follows the general format and content specified in IMO MSC.1 Circ. 1205 (incorporated by reference, see § 160.170-5); and

(2) Includes a checklist for use in monthly, external inspections of the release mechanism.

(b) The release mechanism manufacturer must make the manual required by paragraph (a) of this section available in English to purchasers of a release mechanism approved by the Coast Guard.

(c) The operation and maintenance instructions required by paragraph (a) of this section may be combined with similar material for survival craft and rescue boats, and their launching systems.

§ 160.170-23 Procedure for approval of design, material, or construction change.

(a) Each change in design, material, or construction from the plans approved under 46 CFR 159.005-13 and § 160.170-13(h) of this subpart must be approved by the Commandant before being used in any production release mechanism. The manufacturer must submit any such change following the procedures in § 160.170-9 of this subpart, but documentation on items that are unchanged from the plans approved under 46 CFR 159.005-13 and § 160.170-13(h) of this subpart need not be resubmitted.

(b) Unless determined by the Commandant to be unnecessary, a prototype release mechanism with each change described in paragraph (a) of this section must be made and tested according to the procedures for new approvals in §§ 160.170-9 through 160.170-13 of this subpart.

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

46. Add subpart 160.900 to read as follows:

Subpart 160.900—Preemption

Sec.

160.900-1 Preemption of State or Local law.
160.900-3 [Reserved]

Subpart 160.900—Preemption

§ 160.900-1 Preemption of State or local law.

The regulations in this part have preemptive effect over State or local regulation within the same field.

§ 160.900-3 [Reserved]**PART 164—MATERIALS**

47. The authority citation for part 164 continues to read as follows:

Authority: 46 U.S.C. 3306, 3703, 4302; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

48. Add subpart 164.017 to read as follows:

Subpart 164.017—Fire Retardant Resins for Lifeboats and Rescue Boats

Sec.

- 164.017-1 Scope.
- 164.017-3 Definitions.
- 164.017-5 Incorporation by reference.
- 164.017-7 Acceptance criteria.
- 164.017-9 Procedure for acceptance.
- 164.017-11 Production quality control requirements.
- 164.017-13 Marking, labeling, and instructions for use.
- 164.017-15 Procedure for acceptance of material change.

Subpart 164.017—Fire Retardant Resins for Lifeboats and Rescue Boats**§ 164.017-1 Scope.**

This subpart contains performance requirements, acceptance tests, and production testing and inspection requirements for fire retardant resins used in the construction of lifeboats approved under 46 CFR part 160, subpart 160.135 and rescue boats approved under 46 CFR part 160, subpart 160.156.

§ 164.017-3 Definitions.

In this subpart, the term: *Acceptance* means certification by the Coast Guard that a component is suitable for use in the manufacture of Coast Guard-approved lifeboats and rescue boats.

Commandant means the Commandant (CG-5214), U.S. COAST GUARD, 2100 2ND ST., SW., STOP 7126, WASHINGTON, DC 20593-7126.

§ 164.017-5 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/

ibr locations.html. Also, it is available for inspection at COMMANDANT (CG-5214), U.S. COAST GUARD, 2100 2ND ST., SW., STOP 7126, WASHINGTON, DC 20593-7126 and is available from the sources indicated in this section.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

(1) ASTM D 543-06 Standard Test Method for Resistance of Plastics to Chemical Reagents, IBR approved for § 164.017-7 ("ASTM D 543").

(2) ASTM D 570-98(2005) Standard Test Method for Water Absorption of Plastics, IBR approved for § 164.017-7 ("ASTM D 570").

(3) ASTM D 638-08 Standard Test Method for Tensile Properties of Plastics, IBR approved for § 164.017-7 ("ASTM D 638").

(4) ASTM D 695-08 Standard Test Method for Compressive Properties of Rigid Plastics, IBR approved for § 164.017-7 ("ASTM D 695").

(5) ASTM D 790-07e1 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials, IBR approved for § 164.017-7 ("ASTM D 790").

(6) ASTM D 792-08 Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement, IBR approved for § 164.017-7 ("ASTM D 792").

(7) ASTM D 1045-08 Standard Methods of Sampling and Testing Plasticizers used in Plastics, IBR approved for § 164.017-7 ("ASTM D 1045").

(8) ASTM D 1824-95(2002) Standard Test Method for Apparent Viscosity of Plastisols and Organosols at Low Shear Rates, IBR approved for § 164.017-7 ("ASTM D 1824").

(9) ASTM D 2471-99 Standard Test Method for Gel Time and Peak Exothermic Temperature of Reacting Thermosetting Resins, IBR approved for § 164.017-7 ("ASTM D 2471").

(10) ASTM D 2583-07 Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor, IBR approved for § 164.017-7 ("ASTM D 2583").

(11) ASTM D 2584-08 Standard Test Method of Ignition Loss for Cured Reinforced Resins, IBR approved for § 164.017-7 ("ASTM D 2584").

(12) ASTM G 154-06 Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials, IBR approved for § 164.017-7 ("ASTM G 154-06").

(c) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London

SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) MSC Circular 1006, Guidelines On Fire Test Procedures For Acceptance Of Fire-Retardant Materials For The Construction Of Lifeboats, IBR approved for § 164.017-7 ("IMO MSC Circ. 1006").

(2) [Reserved]

(d) International Organization for Standardization (ISO): ISO Central Secretariat [ISO Copyright Office], Case Postale 56, CH-1211 Geneve 20, Switzerland.

(1) ISO 62:2008 Plastics—Determination of water absorption, IBR approved for § 164.017-7 ("ISO 62").

(2) ISO 175:1999 Plastics—Methods of test for the determination of the effects of immersion in liquid chemicals, IBR approved for § 164.017-7 ("ISO 175").

(3) ISO 14125:1998 Fibre-reinforced plastic composites—Determination of flexural properties, IBR approved for § 164.017-7 ("ISO 14125").

(4) ISO 527-1:1993 Plastics—Determination of tensile properties; IBR approved for § 164.017-7 ("ISO 527").

(5) ISO 604:2002 Plastics—Determination of compressive properties, IBR approved for § 164.017-7 ("ISO 604").

(6) ISO 1172:1996 Textile-glass-reinforced plastics—Prepregs, moulding compounds and laminates—Determination of the textile-glass and mineral-filler content—Calcination methods, IBR approved for § 164.017-7 ("ISO 1172").

(7) ISO 1183-1:2004 Plastics—Methods for determining the density of non-cellular plastics-Part 1: Immersion method, liquid pycnometer method and titration method, IBR approved for § 164.017-7 ("ISO 1183").

(8) ISO 1675:1985 Plastics—Liquid resins—Determination of density by the pycnometer method, IBR approved for § 164.017-7 ("ISO 1675").

(9) ISO 2039-1:2001 Determination of hardness—Part 1: Ball indentation method, IBR approved for § 164.017-7 ("ISO 2039-1").

(10) ISO 2039-2:1997 Determination of hardness—Part 1: Rockwell hardness, IBR approved for § 164.017-7 ("ISO 2039-2").

(11) ISO 2114:2000 Plastics (polyester resins) and paints and varnishes (binders)—Determination of partial acid value and total acid value, IBR approved for § 164.017-7 ("ISO 2114").

(12) ISO 2535:2001 Plastics—Unsaturated-polyester resins—Measurement of gel time at ambient temperature, IBR approved for § 164.017-7 ("ISO 2535").

(13) ISO 2555:1989 Plastics—Resins in the liquid state or as emulsions or dispersions—Determination of apparent

viscosity by the Brookfield test method, IBR approved for § 164.017-7 (“ISO 2555”).

(e) Military Specifications and Standards, Standardization Order Desk, Building 4D, 700 Robins Avenue, Philadelphia, PA 19111-5094, <https://assist.daps.dla.mil/quicksearch/>.

(1) MIL-C-19663D: Cloth, Woven Roving, For Plastic Laminate, 4 AUG 1998, IBR approved for § 164.017-7 (“MIL-C-19663D”).

(2) MIL-P-17549D(SH): Plastic Laminates, Fibrous Glass Reinforced, Marine, 31 AUG 1981, IBR approved for § 164.017-7 (“MIL-P-17549D(SH)”).

(3) MIL-R-7575 C, Resin, Polyester, Low Pressure Laminating, 29 June 1966, IBR approved for § 164.017-7 (“MIL-R-7575 C”).

(4) MIL-R-21607E(SH), Resins, Polyester, Low Pressure Laminating, Fire-Retardant, 25 May 1990, IBR

approved for § 164.017-7 (“MIL-R-21607E(SH)”).

(5) MIL-R-24719(SH), Resins, Vinyl Ester, Low Pressure Laminating, 4 May 1989, IBR approved for § 164.017-7 (“MIL-R-24719(SH)”).

§ 164.017-7 Acceptance criteria.

(a) The laminating resin must pass the inspections and tests specified in this section. The inspections and tests required by this section, including weathering of samples, are the responsibility of the manufacturer and must be performed by an independent laboratory.

(1) *Polyester resins.* (i) The resin must meet the specifications of Grade A, Class O resin of MIL-R-7575C (incorporated by reference, see § 164.017-5) and meet the specifications conforming to Grade A (standard flame resistance) of MIL-R-21607E(SH)

(incorporated by reference, see § 164.017-5).

(ii) MIL-R-21607E(SH) Grade B resins will be given consideration upon request.

(2) *Vinyl ester resins.* The resin must meet the specifications of Grade B (fire retardant) resin of MIL-R-24719(SH) (incorporated by reference, see § 164.017-5) and must be tested and meet the requirements of weathering and post-weathering mechanical testing as shown in Table 164.017-7 of this section. Samples for the weathering must be prepared in accordance with MIL-R-7575C paragraph 4.3.1.1.

(3) *All other resins.* Each resin formulation submitted for Coast Guard approval, other than those addressed in paragraphs (a)(1) and (2) of this section, must be tested and meet the requirements of Table 164.017-7 of this section.

(b) [Reserved]

TABLE 164.017-7—ALTERNATIVE TEST METHOD STANDARDS FOR LAMINATING RESINS FOR USE IN LIFEBOATS, RESCUE BOATS, AND OTHER LIFESAVING EQUIPMENT ¹

Property	Test methods	
(c) MATERIAL IDENTIFICATION TESTS ²		
(1) Uncatalyzed Liquid Resin:		
(i) Specific gravity	ISO 1675 or ASTM D 1045.	
(ii) Viscosity	ISO 2555 or ASTM D 1824.	
(iii) Acid number	ISO 2114 or ASTM D 1045.	
(2) Catalyzed Resin		
(i) Max gel time	ISO 2535 or ASTM D 2471.	
(ii) Peak exotherm	ASTM D 2471	
(3) Cured Unfilled Resin		
(i) Barcol hardness	ISO 2039 or ASTM D 2583.	
(ii) Specific gravity/density	ISO 1183 or ASTM D 792.	
Property	Test method	Requirements ³
(d) LENGTHWISE MECHANICAL & PHYSICAL PROPERTIES OF GLASS CLOTH BASE PLASTIC LAMINATE (Lengthwise direction of test specimens is parallel to the warp direction of glass fabric)		
(1) Tested Under Standard Conditions		
(i) Ultimate strength, flatwise	ISO 14125 or ASTM D 790	345 MPa (50,000 lb/in ²).
(ii) Initial modulus of elasticity, flatwise	ISO 14125 or ASTM D 790	18,616 MPa (2.7 x 10E6 lb/in ²).
(iii) Ultimate tensile strength	ISO 527 or ASTM D 638	278 MPa (40,000 lb/in ²).
(iv) Ultimate compressive strength, edgewise	ISO 604 or ASTM D 695	241 MPa (35,000 lb/in ²).
(v) Fire retardant	MSC Circ. 1006	Pass.
(vi) Water absorption, 24-hour immersion	ISO 62 or ASTM D 570	0.5% max change in weight.
(vii) Barcol hardness	ISO 2039 or ASTM D 2583	55.
(viii) Specific gravity/density	ISO 1183 or ASTM D 792	(²)
(ix) Resin content, percentage	ISO 1172 or ASTM D 2584	(²)
(2) Tested Under Wet Conditions (Specimens must be immersed for 2 hours in boiling distilled water as per ASTM D 570 paragraph 7.5. The specimens must then be cooled in water at 23 °C and tested wet at standard conditions immediately after removal from the water.)		
(i) Ultimate strength, flatwise	ISO 14125 or ASTM D 790	310 MPa (45,000 lb/in ²).
(ii) Initial modulus of elasticity, flatwise	ISO 14125 or ASTM D 790	17,237 MPa (2.5 x 10E6 lb/in ²).
(iii) Ultimate tensile strength	ISO 527 or ASTM D 638	278 MPa (40,000 lb/in ²).
(iv) Ultimate compressive strength, edgewise	ISO 604 or ASTM D 695	241 MPa (35,000 lb/in ²).
(3) Tested Under Elevated Temperature Conditions (Specimens must be exposed to 70 °C for 1 hour and tested at that temperature.)		
(i) Ultimate strength, flatwise	ISO 14125 or ASTM D 790	276 MPa (40,000 lb/in ²).
(ii) Initial modulus of elasticity, flatwise	ISO 14125 or ASTM D 790	15,858 MPa (2.3 x 10E6 lb/in ²).

Property	Test method	Requirements ³
(4) Tested After Exposure to Liquid Chemicals (Standard test chemical reagents.)		
(i) Change in mass & dimensions	ISO 175 or ASTM D 543	0.1% max.
(ii) Ultimate strength	ISO 14125 or ASTM D 790	(²)
(5) Tested After Weathering (Specimens must be weathered by either: 1 year per MIL-R-7575C or 500-hour exposure per ASTM G154 Table X2.1 Cycle 3.)		
(i) Ultimate strength, flatwise	ISO 14125 or ASTM D 790	310 MPa (45,000 lb/in ²).
(ii) Initial modulus of elasticity, flatwise	ISO 14125 or ASTM D 790	17,237 MPa (2.5 x 10E6 lb/in ²).
(iii) Fire retardant	MSC Circ. 1006	Pass.

¹ Each standard in this table is incorporated by reference, see § 164.017-5.

² There are no requirements for these properties, but the values must be determined and reported. Calculations for ultimate flexural strength after immersion in chemical fluids must be based on the dimensions of the specimens before immersion.

³ The specimens must show no cracking, crazing, softening, delamination, or any other visible deterioration after conditioning exposure or immersions.

§ 164.017-9 Procedure for acceptance.

(a) Fire retardant resin is not subject to formal approval, but will be accepted by the Coast Guard on the basis of this subpart for use in the manufacture of lifesaving equipment. Coast Guard acceptance of fire retardant resin for use in the manufacture of lifesaving equipment does not guarantee Coast Guard acceptance of the manufactured lifesaving equipment.

(b) *Resin manufacturer requirements.* The resin manufacturer must submit the test report, material data sheet, including instructions for use, and quality control procedures in accordance with 46 CFR 159.005-9.

(c) *Independent laboratory requirements.* The independent laboratory must perform each inspection and test required by § 164.017-7 of this subpart, and prepare a report in accordance with 46 CFR 159.005-11 and submit the report to the Commandant for acceptance.

§ 164.017-11 Production quality control requirements.

The resin manufacturer must institute a quality control procedure to ensure that all Coast Guard-accepted resin is produced to the same standard, and in the same manner as the tested resin accepted by the Commandant. The manufacturer's quality control personnel must not work directly under the department or person responsible for either production or sales.

§ 164.017-13 Marking, labeling, and instructions for use.

(a) *Marking and labeling.* Each container for the resin must be permanently marked with at least the following information—

- (1) Manufacturer's name or trademark, batch number, date of manufacture, and date of expiration;
- (2) Chemical type of the resin;

(3) Maximum usable storage life of the resin (uncatalyzed and catalyzed) and recommended storage conditions;

(4) Maximum allowable shelf life at various temperatures of impregnated fabric before curing; and

(5) Precautionary markings.

(b) Instructions for use must be included with each shipment of approved material and must include—

(1) Recommended mixing and impregnating procedures, including recommended types, percentages, and manner of utilization of catalysts, retardants, and fillers, as applicable;

(2) Range of time, temperature, and pressure cycles recommended to effect the cure for laminates; and

(3) Precautionary information on usage, storage, and handling.

§ 164.017-15 Procedure for acceptance of material change.

(a) Each change in material from the resin accepted under § 164.017-9 of this subpart must be accepted by the Commandant before being used in any production lifeboat or rescue boat. The manufacturer must submit any such change following the procedures set forth in § 164.017-9 of this subpart, but documentation on items that are unchanged from the resin accepted under § 164.017-9 of this subpart need not be resubmitted.

(b) Determinations of equivalence of materials will be made by the Commandant only.

49. Add subpart 164.900 to read as follows:

Subpart 164.900—Preemption

Sec.

164.900-1 Preemption of State or Local law.

164.900-3 [Reserved]

Subpart 164.900—Preemption

§ 164.900-1 Preemption of State or local law.

The regulations in this part have preemptive effect over State or local regulation within the same field.

§ 164.900-3 [Reserved]

PART 180—LIFESAVING EQUIPMENTS AND ARRANGEMENTS

50. The authority citation for part 180 continues to read as follows:

Authority: 46 U.S.C. 2104, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

51. In § 180.150, revise paragraph (a) introductory text and add paragraph (c) to read as follows:

§ 180.150 Survival craft embarkation arrangements.

(a) A launching appliance described in paragraph (c) of this section, or a marine evacuation system approved under approval series 160.175, must be provided for each inflatable liferaft and inflatable buoyant apparatus when either—

* * * * *

(c) Each launching appliance for a davit-launched liferaft must include an automatic disengaging apparatus approved under 46 CFR part 160, subpart 160.170 and be either—

(1) A davit approved under 46 CFR part 160, subpart 160.132 for use with a liferaft, with a winch approved under 46 CFR part 160, subpart 160.115 for use with a liferaft; or

(2) A launching appliance approved on or before (EFFECTIVE DATE OF FINAL RULE) under approval series 160.163.

**PART 199—LIFESAVING SYSTEMS
FOR CERTAIN INSPECTED VESSELS**

52. The authority citation for part 199 continues to read as follows:

Authority: 46 U.S.C. 3306, 3703; Pub. L. 103–206, 107 Stat. 2439; Department of Homeland Security Delegation No. 0170.1.

53. Revise § 199.150(a) to read as follows:

§ 199.150 Survival craft launching and recovery arrangements; general.

(a)(1) Each launching appliance must be approved under 46 CFR part 160, subpart 160.132 for use with the intended craft, with a winch approved under 46 CFR part 160, subpart 160.115 for use with the intended craft.

(2) Each launching appliance for a davit-launched liferaft must include an automatic disengaging apparatus approved under 46 CFR part 160, subpart 160.170 and be either—

(i) A launching appliance described in paragraph (a)(1) of this section; or

(ii) A launching appliance approved on or before (EFFECTIVE DATE OF FINAL RULE) under approval series 160.163.

* * * * *

Dated: August 16, 2010.

J.G. Lantz,

Director of Commercial Regulations and Standards, U.S. Coast Guard.

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