

**DEPARTMENT OF TRANSPORTATION****Coast Guard**

**46 CFR Parts 90, 98, 125, 126, 127, 128, 129, 130, 131, 132, 134, 170, 174, and 175**

[CGD 82-004 and CGD 86-074]

RIN 2115-AA77

**Offshore Supply Vessels**

**AGENCY:** Coast Guard, DOT.

**ACTION:** Final rule.

**SUMMARY:** In an interim rule published on November 16, 1995, the Coast Guard established a complete set of regulations (a new subchapter L) applicable to new offshore supply vessels (OSVs), including liftboats. This rule adopts the interim rule as final with a number of changes, and brings OSVs under a single, consistent regulatory regime.

**DATES:** This final rule becomes effective on October 20, 1997. OSVs certificated before March 15, 1996, may either comply with these regulations in their entirety or continue to comply with, and be certificated under, current regulations and policy. The Director of the Federal Register has approved as of November 16, 1995, the incorporation by reference of certain publications listed in the regulations.

**ADDRESSES:** Unless otherwise indicated, documents referred to in this preamble are available for inspection or copying at the office of the Executive Secretary, Marine Safety Council (G-LRA/3406), U.S. Coast Guard Headquarters, 2100 Second Street SW., room 3406, Washington, DC 20593-0001 between 9:30 a.m. and 2 p.m., Monday through Friday, except Federal holidays. The telephone number is (202) 267-1477.

**FOR FURTHER INFORMATION CONTACT:** James M. Magill, Office of Operating and Environmental Standards (G-MSO-2), Room 1208c, U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593-0001. The telephone number is (202) 267-1181.

**SUPPLEMENTARY INFORMATION:****Regulatory History**

On February 14, 1983, the Coast Guard published the first of two ANPRMs (48 FR 6636; CGD 82-004) in order to provide the public with an early opportunity to comment on a preliminary draft of the comprehensive set of requirements for inspection and certification applicable to new offshore supply vessels (OSVs). The Coast Guard received 24 comment letters addressing various technical aspects of the proposal. Many of the recommendations

from those comments were incorporated into the subsequent notice of proposed rulemaking (NPRM) discussed below.

On April 16, 1987, the Coast Guard published the second ANPRM (52 FR 12439), which asked for specific information to help the Coast Guard in developing specialized regulations for self-elevating OSVs (liftboats). Many of the recommendations contained in the 14 comment letters received by the Coast Guard were incorporated into the subsequent NPRM discussed below.

On May 9, 1989, the Coast Guard published an NPRM (54 FR 20006). The original comment period was scheduled to end on September 6, 1989, but on August 31, 1989, it was extended until December 6, 1989 (54 FR 36040). Included with the extension of the comment period was notice of a public hearing on the proposed rule. The hearing took place at New Orleans, Louisiana on September 13, 1989. The Coast Guard received 20 letters containing a total of 194 comments on various technical aspects of the proposed rule. Many of the recommendations from those comments were incorporated into the interim rule.

On November 16, 1995, the Coast Guard published an interim rule, with a request for comments, entitled "Offshore Supply Vessels" in the **Federal Register** (60 FR 57630). No public hearing was requested, and none was held. On February 28, 1996, the Coast Guard published a notice in the **Federal Register** reopening the comment period until March 31, 1996 (61 FR 7425). The Coast Guard received 8 letters containing a total of 330 comments on the interim rule. Many of the recommendations from those comments were incorporated into this final rule.

**Background and Purpose**

Conventional OSVs have traditionally provided a wide range of supply and support to offshore industries extracting oil and minerals. Although these vessels historically operated almost exclusively in the Gulf of Mexico, they now operate worldwide.

Self-elevating OSVs, commonly known as liftboats, are more specialized in their service. These vessels have built-in jacking-systems which allow them to be "jacked up" above the ocean's surface and to become, in effect, stationary platforms for a temporary period. Once jacked up, these vessels render specific service, such as maintenance and construction, to adjacent offshore structures. New liftboats should enjoy a wider and less restrictive scope of operation than those certificated before the effective date of

this final rule due to the structural strength and stability standards contained in this final rule.

The most significant aspect of the new 46 CFR, subchapter L, is its consolidation of requirements for OSVs. Prior to implementation of these regulations, existing OSVs had been inspected and certified under a number of regulations depending on their age and tonnage, such as 46 CFR subchapter I (Cargo and Miscellaneous Vessels) or subchapter T (Small Passenger Vessels). This led to uncertainty and inconsistency. Implementation of a new subchapter L removes this uncertainty and inconsistency by consolidating existing standards and policy into a single subchapter.

The requirements of the new subchapter L contained in the interim rule became effective on March 15, 1996. This final rule adopts the interim rule with a number of changes brought about primarily by the comments to the interim rule. This final rule applies to new OSVs contracted for after the effective date of these regulations and to OSVs that undergo major conversions after the effective date of these regulations. It also applies to existing OSVs, including pre-1979 OSVs, if the owners of these OSVs wish.

These regulations contain many changes to previous regulations and policies governing conventional OSVs, and include first-time regulations for previously uninspected liftboats. Many of the requirements in this final rule are similar to corresponding requirements in subchapters I and T.

**Associated Regulatory Projects**

Since the publication of the OSV interim rule, another interim rule entitled "Lifesaving Equipment" was published in the **Federal Register** (61 FR 25272; May 20, 1996). The latter interim rule governed lifesaving systems for OSVs, including liftboats, in 46 CFR part 133. Part 133 on lifesaving systems, which is part of subchapter L and of this interim rule, became effective on October 1, 1996. The final rule on lifesaving equipment should be published in the near future and should coincide closely with the publication of this final rule.

On February 13, 1990, the Coast Guard published an NPRM entitled "Stability Design and Operational Regulations" (55 FR 5120). On September 11, 1992, it published the final rule (57 FR 41812). Stability and operational requirements from that rule have been adopted here in §§ 131.220 (e), (f), and (g); 131.513; and 131.620(d). Both final rules incorporate, for inspected vessels, recently adopted

amendments to the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS), and seek to reduce the potential for vessels to capsize because of defective designs or operations.

On December 18, 1996, the Coast Guard published a final rule entitled "Offshore Supply Vessels; Alternative Tonnage" (61 FR 66613). That rule, which was strictly interpretive, became effective on December 18, 1996, and established an alternative upper limit on tonnage for OSVs based on the International Convention Measurement System. That rule amended the definition of OSV in 46 CFR 125.160, and this final rule now employs the amended definition.

### Discussion of Comments and Changes

The Coast Guard thanks the many interested parties who submitted comment letters to the public docket. It received 8 letters, containing 330 comments. These comments provided very useful information and afforded valuable assistance to the completion of this final rule. The Coast Guard evaluated all comments, and incorporated many of their recommendations into the final rule.

This section discusses the comments received and the Coast Guard's response to them. It is divided into two subsections. The first discusses comments and changes regarding the specific CFR sections, and the second discusses nonspecific comments concerning issues related to this rulemaking. This preamble does not discuss non-substantive or editorial comments.

### Comments and Changes Relating to Specific CFR Sections

Comments and changes to each section of the interim rule are discussed within the following paragraphs, and the paragraphs are numbered in the order of their appearance in the interim rule.

#### 1. 46 CFR 90.05-20(a)

Two comments suggested that the words "the keel of which was laid (or that was at a similar stage of construction)" should be substituted for the words "contracted for" so that a physical event, rather than a commercial event, would be available to gauge the applicability of grandfathering. These comments also pointed out that many OSV owners construct their own vessels, and that, therefore, a contract may not exist. Most owners will have a contract for the construction of their OSVs; hence the wording "contracted for" remains.

However, wording to the effect of "the keel of which was laid" has been added to fix an alternative date of applicability for those owners who build their own OSVs.

One comment requested that the reference to 500 gross tons in § 90.05-20(a) be deleted since, by definition, OSVs are less than 500 gross tons. Lower limits on tonnage are necessary in this section, however, because only existing OSVs of 100 gross tons or more and less than 500 gross tons are inspected under subchapter I—not OSVs between 15 and 100 gross tons.

One comment suggested that the wording in § 90.05-20(a) be clarified since it implied that no OSV would be grandfathered regardless of the build date. The Coast Guard agrees, and has revised this section to distinguish between the rules that apply to existing OSVs and those that apply to new OSVs.

#### 2. 46 CFR 90.10-40

The definition of "Offshore supply vessel" in § 90.10-40(a) has been changed to include the amendments of the December 18, 1996 interpretative rule "Offshore Supply Vessels; Alternate Tonnage" (61 FR 66613), similar to that in §§ 125.160 and 175.400. Two comments suggested adding "the keel of which was laid" to § 90.10-40 (b) and (c). The Coast Guard agrees, and has made this change. One comment expressed confusion as to whether or how subchapter L would be applied to existing OSVs and liftboats when undergoing modifications. The Coast Guard agrees that the rules do not adequately address modifications to existing vessels. Consequently, the definition of a new OSV in § 90.10-40(c) has been revised to include a vessel that undergoes a major conversion after March 15, 1996. The definition of a "major conversion", which appears in 46 U.S.C. 2101(14a), has been added to § 125.160. If the modification to the vessel constitutes a major conversion, then the entire vessel must be reviewed and inspected as a new vessel.

#### 3. 46 CFR 98.31- 5, 10 and 15

Two comments pointed out that subpart 98.31 should still apply to existing OSVs and should be reinstated. The Coast Guard agrees and has reinstated subpart 98.31, but has revised the applicability in § 98.31-5 to apply only to existing vessels.

#### 4. 46 CFR 125.100

One comment requested clarification on the scope of major conversions. The Coast Guard's internal guidance for determining what amounts to a major

conversion appears in NVIC 10-81, chapter 1. The comment also recommended that, in the case of an existing vessel that undergoes a major conversion, subchapter L should apply only to the sections of the OSV that are altered. The Coast Guard disagrees and states that if a modification constitutes a major conversion, then the complete vessel must be reviewed and inspected as a new vessel.

Sections 125.100 (a) and (b) have been revised to include such wording as "the keel of which was laid," similar to that added in § 90.05-20(a). A new paragraph (e) has also been added to clarify the term "vessel that was contracted for"; it is similar to § 90.05-5 of this chapter pertaining to cargo or miscellaneous vessels.

#### 5. 46 CFR 125.110

Three comments indicated that § 125.110 did not address the carriage of Grade-C flammable liquids in integral tanks. The carriage of Grade-C flammable liquids is allowed on a case-by-case basis with approval of the Commandant (G-MSE) under § 125.110(a).

#### 6. 46 CFR 125.110(b) (1) and (2)

Two comments suggested the removal of the 20 percent deadweight restriction on the carriage of Grade-D and Grade-E combustible liquids in integral tanks because it imposes an unnecessary disadvantage on U.S.-flagged OSVs compared to foreign-flagged OSVs, which are governed by International Maritime Organization (IMO) Resolution A.673(16), Guidelines for the Transport and Handling of Limited Amounts of Hazardous and Noxious Liquid Substances in Bulk on Offshore Supply Vessels. They pointed out that, under IMO Resolution A.673(16), 40 percent deadweight was permitted. The Coast Guard does permit the carriage of greater than 20 percent deadweight of Grade-D and Grade-E combustible liquids in integral tanks on a case-by-case basis with approval of the Commandant under § 125.110(a).

#### 7. 46 CFR 125.110(c)

Two comments thought that the carriage of liquids of Grade B and lower in fixed independent tanks on deck should be permitted without limit. The Coast Guard permits the carriage of greater than 20 percent deadweight of liquids of Grade B and lower in fixed independent tanks on deck under § 125.120(a) with the approval of the Commandant (G-MSE).

**8. 46 CFR 125.120(b)**

Two comments thought that the 20-percent deadweight restriction on the carriage of noxious liquid substances (NLSs) imposed an unnecessary disadvantage on U.S.-flagged OSVs as against foreign-flagged OSVs, which are governed by IMO Resolution A.673(16). They pointed out that, under IMO Resolution A.673(16), 40 percent deadweight was permitted, and recommended that IMO Resolution A.673(16) be adopted and used as an appropriate regulation under § 125.120. The Coast Guard does not agree that the adoption of IMO Resolution A.673(16) is appropriate, because it is too severe for typical OSVs operating in U.S. waters and the language of the guidelines is imprecise. The Coast Guard does permit the carriage of greater than 20 percent deadweight of NLS, with the approval of the Commandant (G-MSE), under § 125.120(a). The Coast Guard will also consider certificating vessels built to IMO Resolution A.673(16), on a case-by-case basis, with the approval of the Commandant (G-MSE), under § 125.120(a).

**9. 46 CFR 125.140**

Two comments suggested that, for clarity, the text in § 92.01-5 of this chapter should be substituted for this section. The Coast Guard has revised this section to make it similar to § 92.01-5.

**10. 46 CFR 125.160**

Two comments questioned the use of "Accommodation" in the singular. They pointed out that all seven spaces listed in the definition should count as accommodations. The Coast Guard agrees and has revised this definition.

Two comments also suggested that "Quarters" be replaced by "Berthing spaces," as the latter better describes the use of the space in question. The Coast Guard recognizes that the term "quarters" is a well used and accepted term in the marine industry and has appropriately defined the term in this section.

Four comments thought that the definition for "Crane" was too broad and might encompass stores cranes, boat davits, and other lifting appliances. The comments asked that the definition be revised to exclude material-handling gear for general ship's service. The Coast Guard agrees, and has revised the definition to exclude such gear.

Two comments concerned the definition of "Damp or Wet Space." This definition has been deleted since it is not used in this final rule.

Two comments suggested punctuation changes to the definition of "Offshore

Worker." The Coast Guard agrees with this suggestion and has removed the commas after "master" and "crew."

The definition of "Offshore supply vessel" in § 125.160 has been changed to include the amendments brought about by the December 18, 1996 interpretative rule "Offshore Supply Vessels; Alternate Tonnage" (61 FR 66613).

The Coast Guard has realized that definitions of "New offshore supply vessel", "Existing offshore supply vessel", and "Major conversion" should have been included in subchapter L. Consequently, definitions identical to those in § 90.10-40(b) and (c) have been included in § 125.160 for "New offshore supply vessel" and "Existing offshore supply vessel". The definition of "Major conversion" has also been included, which is similar to that in 46 U.S.C. 2101(14a).

**11. 46 CFR 125.180**

Two comments questioned the incorporation by reference of classification society rules. They argued that such practice may impose an undue burden on OSV owners who otherwise would not elect to "class" their vessels. The incorporation by reference of classification society rules does not mean that owners have to class their vessels. It is a procedure used by Federal agencies to regulate by reference to material already published and available elsewhere. It reduces the redundancy and bulk of the **Federal Register** and the CFR. An owner may elect not to class an OSV, but must use those rules as criteria where required by this subchapter.

**12. 46 CFR 126.100**

Two comments requested that the language in § 126.100 be replaced by that in § 91.25-50 of subchapter I. They pointed out that the standard should not be the inspector's determination as to "suitability for intended service," but rather his or her determination of the "safety and seaworthiness" of the vessel. The Coast Guard agrees that the language in § 91.25-50 is more standard and suitable, and has changed the language in § 126.100 to be similar to that in § 91.25-50.

**13. 46 CFR 126.110(b)(1)**

Two comments requested that the language in § 126.110(b)(1) be replaced by that in § 91.30-1 of subchapter I. They pointed out that § 91.30-1 requires only that the survey after an accident ensure that repairs or renewals are effectively made, but does not require the inspector's determination as to what repairs or renewals must be made. The

Coast Guard agrees and has revised the language in § 126.110(b)(1) to be similar to that used in § 91.30-1.

**14. 46 CFR 126.120(a)**

Two comments requested that the language in § 126.120(a) be replaced by that in § 91.05-1 of subchapter I. The comments pointed out that a Certificate of Inspection (COI) not complied with is not the same as one "that is about to expire or has expired." The Coast Guard agrees that, for consistency, the language in the subchapters should be similar, and has revised the language in § 126.120(a) to be similar to that used in § 91.05-1.

**15. 46 CFR 126.140(a)**

Two comments recommended that § 126.140 allow the cognizant Officer in Charge, Marine Inspection (OCMI) to accept an "Under-Water Inspection in Lieu of Drydocking" (UWILD) for the intermediate drydocking. The Coast Guard accepts UWILDs in certain situations and by special approval of the Commandant (G-MSE), such as for mobile offshore drilling units (MODUs) under 46 CFR 107.265 and 107.267. This acceptance has been granted primarily because these vessels are so large that few drydocks are available to accommodate them. OSVs, including liftboats, are not so large as to present a problem for normal drydocking. Consequently, the recommendation has not been adopted.

**16. 46 CFR 126.140(b)**

Two comments pointed out that the requirement in § 126.140(b), to notify the cognizant OCMI when the OSV is drydocked for any reason, may be burdensome for the owner as well as the cognizant OCMI. They said that crewboats under 100 gross tons change out propellers 24 hours a day and that the cognizant OCMI or his representative may not always be available. This requirement is similar to that in 46 CFR 176.600(f) for subchapter T. If there is propeller damage, there may be other underwater damage; the cognizant OCMI, therefore, needs to be appraised of the extent of any damage.

**17. 46 CFR 126.150**

Two comments suggested that § 126.150(c) should be revised to allow repair work or alterations to begin upon oral approval of the cognizant OCMI, prior to the submission of approved drawings. It is a misunderstanding that repair work or alterations are permitted under subchapter I without advance approval of a cognizant OCMI under § 91.45-1(b). One comment added that often, in order to get a repair completed

in a timely fashion, work must start before a drawing can be completed or approved. The Coast Guard disagrees. The clear intent of § 91.45-1(b) is that drawings of alterations should be approved before work is started, and that drawings will not be needed if deemed unnecessary by the cognizant OCMI. Approval of drawings before work begins is of paramount importance, because any work done that does not match the approved drawings may have to be redone, with added expense and delay in the vessel's return to service. The Coast Guard encounters many instances of owners proceeding with non-emergency repairs or alterations before they obtain the approval of the cognizant OCMI and incurring rework and added expense. This paragraph remains unchanged apart from a sentence to give the OCMI the flexibility to determine whether drawings may not be necessary.

*18. 46 CFR 126.160(c)(1)*

Two comments urged that the second sentence of § 126.160(c)(1) be revised to exclude the phrase "upon the recommendation of the contractor and the owner or operator of the OSV." The Coast Guard disagrees. The parties involved with the work being performed (the contractor, owner, or operator) must be comfortable with the person used in place of the certified marine chemist and, therefore, allowed some say in who is selected as a replacement.

*19. 46 CFR 126.170*

Three comments pointed out that § 126.170 imposes limits on the number of offshore workers permitted on liftboats. They explained that frequently liftboats are used as work platforms for construction and maintenance operations, and must be able to provide unspecified accommodations for industrial personnel when liftboats are in the elevated mode. The Coast Guard does not agree that liftboats that are certificated under this subchapter and that are in the elevated mode should be permitted to accommodate an unspecified number of offshore workers. In either the elevated or afloat mode, the total number of offshore workers accommodated cannot be greater than 36 as permitted under § 174.205. The fact that the vessel is in the elevated mode is not a valid argument for providing accommodations for a larger number of persons. Since, in the event of a storm, the liftboat may have to leave the site quickly and move to a harbor of safe refuge, the loading and stability of the vessel in the elevated mode must always be such that the vessel will meet the afloat-stability criteria. Changing of

the elevated loading condition to meet the afloat stability criteria is not permitted, as a storm may develop quickly leaving no time for a change of loading.

However, if the permanent accommodation stated on the COI is less than 36, the cognizant OCMI may, on a case-by-case basis, permit the use of additional temporary quarters for offshore workers up to a total of 36 (not counting the crew quarters), in order to augment the permanent accommodation, provided the vessel is designed to meet the damaged stability requirements for more than 16 persons in § 174.205. The cognizant OCMI will make the judgment on the number of additional temporary quarters permitted, taking into consideration such things as the need for extra lifesaving equipment and the effects on stability of the added quarters. If a liftboat is intended to carry more than 36 offshore workers, the vessel cannot be certificated under subchapter L, and must be certificated and meet the rules of an appropriate vessel class under this chapter.

Two comments suggested that § 126.170(a) should permit the cognizant OCMI to raise the maximum number of offshore workers, given a vessel's compliance with other regulatory criteria, such as lifesaving equipment and stability. Subchapter L already permits the carriage of up to 36 offshore workers if a vessel meets more stringent damaged stability criteria. For Subchapter L to permit the carriage of even more offshore workers, other than in an emergency, would present a risk unacceptable to the Coast Guard, because subchapter L is less stringent than prior regulations in other respects. For example, new subchapter L allows the carriage of unlimited amounts of fuel for transfer to the platforms.

*20. 46 CFR 126.170(a)*

Two comments suggested that crewboats should be permitted to carry as many as 100 offshore workers, provided the boats meet the additional requirements of § 171.080(d)(3), and still be considered OSVs. The Coast Guard does not agree with this suggestion. Vessels carrying more than 36 offshore workers cannot be certificated under subchapter L, because, under § 126.170(a), an OSV is restricted to the carriage of no more than 36 offshore workers. Consequently, crewboats carrying 36 or more offshore workers may not be certificated under subchapter L, but must be certificated as small passenger vessels under subchapter T or K.

*21. 46 CFR 126.230(b)*

Two comments asked whether a vessel converted from another service (such as a freight vessel converted to an OSV) would require inspection under subchapter L. They recommended that an existing vessel, constructed prior to March 15, 1996, but subject to a "change of service" modification or alteration, be permitted to retain its status as an existing vessel within the scope of subchapter I or T. The Coast Guard agrees in part with this recommendation. If an existing vessel was converted or subject to a "change of service," such as from freight vessel to OSV prior to March 15, 1996, it does not have to comply with subchapter L. Rather, it would have to, at the owner's discretion, comply with either the regulations in effect at that time (subchapter I or T), or the new subchapter L. If a vessel changes from another service to OSV or undergoes a major conversion on or after March 15, 1996, it must be reviewed and inspected as a new OSV under subchapter L. Major conversion and major or minor alteration are discussed in 46 CFR 90.10-40 (b) and (c), and 46 CFR 125.100. For clarity, § 126.230(b) substitutes "undergoing a major conversion" for "being \* \* \* converted."

*22. 46 CFR 126.350(b)(2)*

One comment requested clarification regarding the manual test required on hydraulic steering systems in § 126.350(b)(2). The comment pointed out that many OSVs of less than 100 gross tons do not have the capability for manual operation and asked if the intention of the Coast Guard was to require a design change. Some servo-type power hydraulic steering systems have a manual operation that can meet the requirement in § 130.140(b)(15) or serve as the auxiliary means of steering. The wording in § 126.350(b)(2) has been revised to clarify that this test is required only if the system is fitted for manual operation.

*23. 46 CFR 126.350(b)(3)*

Two comments pointed out that subpart 94.35 did not address rescue boats and that § 126.350(b)(3) should not refer to rescue boats. On May 20, 1996, the Coast Guard published an interim rule entitled "Lifesaving Equipment" (61 FR 25272) that removed 46 CFR part 94 in its entirety, and placed tests and inspections of lifesaving equipment into part 133 (Lifesaving Systems) of subchapter L. At present, the initial inspection of lifesaving appliances, including rescue

boats, is addressed in § 133.45(a) and § 126.350(b)(3) has been removed.

**24. 46 CFR 126.430**

Two comments requested that the wording in the first paragraph of § 126.430 concerning "fit for its intended use" be changed to be similar to that in § 126.100. The Coast Guard agrees and has made this change.

**25. 46 CFR 126.530(a)**

Three comments argued that § 126.530 should not exclude liftboats from the alternative midperiod examination provisions permitted for conventional hull form OSVs of less than 400 gross tons. One comment also recommended that OSVs of 400 gross tons or more be included in the alternative midperiod examination provision.

On January 25, 1990, the Coast Guard published alternative provisions for reinspection of OSVs of less than 400 gross tons in foreign ports (55 FR 2522). These provisions were subsequently incorporated into the interim rule for OSVs and are now incorporated into this final rule as § 126.530. The Coast Guard initially excluded liftboats from the alternative midperiod examination provisions based on their casualty record, which was significantly worse than conventional hull form OSVs. In addition, the Coast Guard needed to gain experience with liftboat inspections, and was not aware of any U.S.-flag liftboats presently working overseas. However, a re-evaluation of the casualty record of liftboats from 1990 to 1995 has concluded that the casualty record for liftboats is about equal to that of conventional hull form OSVs. Consequently, the Coast Guard has decided that liftboats should be given the same opportunity for alternative midperiod inspection as conventional OSVs, and has deleted the words "except a liftboat" from § 126.530(a) to allow liftboats to participate in the alternative provisions for reinspection of OSVs of less than 400 gross tons in foreign ports.

Because the Coast Guard does not have the statutory authority to delegate authority over certificates under the International Oil Pollution Prevention (IOPP) to third parties, OSVs of 400 gross tons or more can not be included in the alternative midperiod inspection.

**26. 46 CFR 127.110**

The Coast Guard has found it unnecessary for certain plans to be submitted for approval under § 127.110 (a) and (b). Consequently, paragraphs (a)(4) and (b)(3) through (b)(6) of § 127.110 have been deleted. There is no

added value for Marine Safety Center or OCMI plan review of these plans, as they can be handled during initial inspection by the Coast Guard marine inspector. Section 127.110(a)(1) has been changed to indicate that specifications are to be submitted for information only as the Coast Guard does not approve specifications. Section 127.110(a)(3) has been changed to indicate that the safety plan (fire-control plan) is to be submitted for OCMI review and approval. This plan is not technical in nature and basically requires the marine inspector to verify that the firefighting equipment on the vessel is as depicted on the plan, and meets the Coast Guard regulations.

**27. 46 CFR 127.210(a)**

Two comments suggested that the phrase "equivalent to those" be inserted in the first sentence between "rules" and "established." The Coast Guard does not agree, because § 127.210(b) already permits the use of an approved alternative classification society, or any other established standard.

**28. 46 CFR 127.220(d)**

Two comments said that the A-60 class construction for bulkheads and decks required in § 127.220(d) would impose an undue economic burden on aluminum crewboats. The comments recommended adding a paragraph to allow aluminum crewboats to meet the requirements of subchapter T. Crewboats do not have to meet the requirements of subchapter L: They may be certificated under subchapter T or K. Therefore, this section is unchanged.

**29. 46 CFR 127.240(a)**

Four comments pointed out that the two means of escape required by § 127.240(a) would require all sizes of compartments, including small closets and deck lockers, to have two means of escape. The comments recommended that spaces with an area of 46.5 square meters (500 square feet) or less require only one means of escape. The Coast Guard agrees that a restriction on the size of a compartment requiring two means of escape is needed. A new section, § 127.240(l), has been added to allow one means of escape from spaces with a maximum area and greatest dimension of less than 28 square meters (300 square feet) and 6 meters (20 feet), respectively. The 28 square meter (300 square feet) area restriction is similar to that in § 92.10-35 of subchapter I. However, the Coast Guard has determined that whether a space should require two means of escape should depend on dimensions as well as on area. Therefore, it prohibits long narrow

spaces without two means of escape, irrespective of their areas. Accordingly, the 6 meter (20 feet) restriction on the maximum dimension was also included in new § 127.240(l).

Three comments urged that windows and portholes should be permitted to serve as secondary means of escape. The Coast Guard disagrees. The crew and offshore workers may be wearing immersion suits, making escape through windows and portholes awkward if not impossible. However, the Coast Guard has added § 127.240(m) to allow the cognizant OCMI the latitude to accept other means of escape if the level of safety is not diminished.

**30. 46 CFR 127.240(h)**

One comment requested a minimum dimension be provided for the width of the passageways or stairways in § 127.240(h), similar to that provided in subchapter I. The Coast Guard is moving away from prescriptive regulations towards a goal-oriented approach. Goal-oriented requirements allow the designer to satisfy a safety goal in different ways as technology changes. The safety of the vessel is the responsibility of the owner and cannot always be described by prescriptive regulations. The Coast Guard has articulated a goal relative to the width, but the final width must be determined by the designer and owner. However, paragraph (i) requires interior stairways, other than those in machinery or cargo spaces, to be not less than 28 inches wide.

**31. 46 CFR 127.240(k)**

Four comments suggested that vertical ladders be permitted as access to the pilot house because, on small OSVs (less than 100 gross tons), inclined ladders were virtually impossible to use due to space limitations. The Coast Guard agrees that vertical ladders should be permitted as access to the pilot house and to other house tops not normally manned and used only as weather protection and has revised § 127.240(k) to reflect this change.

**32. 46 CFR 127.270(a)**

Two comments requested that "quarters" be replaced by "berthing spaces," similar to the suggestion in § 125.160. The Coast Guard does not agree, for the reasons set forth in response to the comments on § 125.160.

**33. 46 CFR 127.270(c) (2) & (3)**

Three comments were confused by the description of the location of the vertical ladders in §§ 127.270(c)(2) and 127.270(c)(3). This confusion is understandable since language from the

NPRM was excluded from the interim rule. In any case, the Coast Guard has decided to drop the requirements in §§ 127.270(c)(2) and 127.270(c)(3) of the interim rule. These requirements were added after the ANPRM, and endeavored to link damaged stability with means of escape from damaged compartments. The Coast Guard has decided to drop any criteria linking damaged stability with providing means of escape from a damaged flooding compartment. A new § 127.270(c)(2) has been added that is similar to that in the ANPRM, and in § 92.20–10(a) of subchapter I. This permits an exception to § 127.270(b), provided that the damaged stability requirements in § 174.205 are met and that the deck head is not below the deepest load waterline.

**34. 46 CFR 127.270(e)**

Two comments stated that the wording of § 127.270(e) implies that accommodations for crew and offshore workers are to be separated. The comments suggested deleting the words "for crew members or offshore workers." The Coast Guard did not intend to imply that the accommodations of crew and offshore workers should be separated and has revised this paragraph to adopt the recommendation.

**35. 46 CFR 127.270(f)**

Two comments stated that § 127.270(f) should permit access openings to fuel tanks. The comments pointed out that access to fuel tanks is needed during drydock and hull survey, and that access to double bottom fuel tanks located under accommodations may not be practicable any place other than in the accommodations. The comments recommended deleting the words "access openings" from this paragraph. The Coast Guard agrees in part, and has revised this paragraph to permit access openings to fuel tanks in accommodations, except in sleeping quarters. Manholes to fuel tanks in sleeping quarters would be disruptive to the crew and could potentially expose them to noxious fumes. A new paragraph banning access openings in sleeping quarters has been added as § 127.270(g). The material in the original § 127.270(g), as stated in the interim rule, has been redesignated as § 127.270(h).

**36. 46 CFR 127.270(g)**

Four comments argued that § 127.270(g), which requires separate accommodations for crew and offshore workers, is impracticable and unnecessary. The Coast Guard agrees in

part. Accommodations for crew and offshore workers may be shared except for sleeping quarters. If the crew and offshore workers shared sleeping quarters, the crew's normal sleeping patterns could be interrupted by the offshore workers. Section 127.270(g), redesignated as § 127.270(h), has been revised to require that only the quarters of the crew and the offshore workers be separated.

**37. 46 CFR 127.280(a)(1)**

Two comments stated that there is no practical reason to limit the number of berths in a stateroom to four. The Coast Guard disagrees. Limiting the number of crew in a stateroom to four, limits the amount of sleep disruptions.

**38. 46 CFR 127.280(b)(1)**

Two comments suggested that a seating width criteria should be included. The Coast Guard agrees and has added a seating width of 400 millimeters (18 inches).

One comment thought that §§ 127.280(b)(1) and (2) required OSVs that carry offshore workers aboard for more than 24 hours to provide both fixed seating and berthing. This is not the case. Berths are required for offshore workers only when aboard for more than 24 hours. To accommodate offshore workers on a voyage of less than 24 hours, the aggregate of available berths and fixed seating may be used to equal the number aboard.

**39. 46 CFR 127.280(d)**

One comment thought that § 127.280(d) required "A" class bulkheads between accommodations for the crew members and those of the offshore workers. To clarify, § 127.280(d) requires "A" class bulkheads only between machinery spaces and accommodations for either the crew or the offshore workers.

**40. 46 CFR 127.280(e)**

Two comments asked whether the cognizant OCMI would separately stipulate the number of offshore workers permitted for a "less than" and "over" 24-hour voyage. The cognizant OCMI will stipulate on the COI the number of offshore workers permitted to be carried for both the "less than 24 hours" voyage and the "over 24 hours" voyage.

**41. 46 CFR 127.420**

One comment stated that the requirements for window and portlight strength were vague and should be removed and addressed later in an NVIC. The Coast Guard disagrees. Section 127.420 is a non-prescriptive regulation allowing the designer

discretion to vary conditions and routes of the vessel.

**42. 46 CFR 127.440**

Four comments objected to the requirement that covers over windows and portlights be able to be removed or opened from the inside. They suggested that this section be removed, or at least revised to apply only to those windows or portlights designated as means of escape. The Coast Guard agrees in part. This section was added in the interim rule based on comments and recommendations by the National Transportation Safety Board (NTSB), which cited the case concerning the capsizing and sinking of the liftboat M/V TITAN on June 29, 1989. The vessel capsized to starboard in less than 1 minute and trapped four persons inside. They were not able to escape because their only means of escape, galley and mess room windows, were covered with protective metal plates secured from the outside. They were able to break the glass of the windows and could have escaped had it not been for the protective coverings. The Coast Guard agrees with the NTSB recommendation that these lives might have been saved if the covers could have been removed from the inside. The Coast Guard has revised this section so that it does not apply to small windows and portholes through which escape is not possible anyway, and has added a sentence that assumes that the glass in fixed windows can be broken, giving access to the outside.

**43. 46 CFR 128.130(a)(9)**

Section 128.130(a)(9) has been revised to clarify that only ship's service and emergency electrical-generation systems and their auxiliaries vital to the vessel's survivability and safety, constitute vital systems. Ship service and emergency systems, not vital to the vessel's survivability and safety are not vital systems.

**44. 46 CFR 128.220(b)**

Two comments pointed out that some OSV builders may opt to use non-ferrous piping materials, such as copper nickel (Cu-Ni) or glass reinforced piping (GRP), for salt-water piping systems. They recommended that the words "and if ferrous" be added after "material" in the first sentence to clarify that the requirement for galvanization applies to ferrous piping material. The Coast Guard agrees and has made this change.

**45. 46 CFR 128.240(b)**

Two comments stated that acceptance by the Coast Guard of non-standard hydraulic or pneumatic components

would raise concerns regarding legal exposure and may increase the cost of constructing an OSV. The Coast Guard does not agree. This requirement permits the use of non-standard hydraulic or pneumatic components only as an alternative; components complying with subchapter F (Marine Engineering) will be accepted. The Coast Guard is endeavoring to cooperate with industry to accept non-Coast Guard approved components, provided they meet an equivalent standard of safety.

**46. 46 CFR 128.410**

Two comments requested that "self-contained" be defined so as to eliminate confusion between the owner or builder and the cognizant OCMI. This requirement is meant to apply only to an air-conditioning or refrigeration unit designed and built as a single, self-contained unit.

**47. 46 CFR 128.420(d)**

Two comments requested that non-metallic flexible connections be permitted to serve as connections at the end of the non-metallic flexible hose used for keel-cooler connections to machinery, rather than metallic hose clamps. The Coast Guard agrees to the use of non-metallic hose-clamps but not to that of flexible connections, provided they can withstand vibration and high temperatures and do not become brittle. This section is modified to allow the use of non-metallic hose clamps, and a new paragraph (4) is added to address vibration, high temperature, and brittleness.

**48. 46 CFR 129.320(a)**

Section 129.320(a) has been revised to exempt submersible pump motors from its requirements.

**49. 46 CFR 129.330**

One comment pointed out that the American Bureau of Shipping (ABS) rules and the Coast Guard regulations in § 111.30-1 require 915 millimeters (36 inches) of working space in front of switchboards, but the interim rule required only 610 millimeters (24 inches). The Coast Guard based the 610-millimeter dimension on the fact that OSVs are smaller than cargo vessels and are more limited in space. Also, the switchboards are not as large as on cargo vessels. The 24-inch dimension is a minimum dimension, and does not prevent the designer from leaving more working space if needed. The Coast Guard's new interim rule for small passenger vessels (subchapters T and K) also requires only 610 millimeters (24 inches) of working space in front of switchboards. As previously stated, the

Coast Guard is endeavoring to attain uniformity between these two rulemakings in areas where uniform treatment is warranted; thus, the 24-inch dimension remains unchanged.

The Coast Guard has revised the inaccessible restriction in this paragraph for clarity and to make it the same as the new subchapter T and K regulations.

**50. 46 CFR 129.350(b)**

Two comments expressed concern that this paragraph could be interpreted to mean that batteries must be located at the highest level of the vessel, and suggested that a specific distance above the bilge, 460 millimeters (18 inches), be used as an acceptable height. The intent of the regulation was to require that batteries be located as high above the bilge as possible. Additional wording has been added to the paragraph to clarify this.

**51. 46 CFR 129.350(g)**

One comment asked whether it was the intent of this regulation to require fuses for engine-start batteries. This section requires fuses only on the leads of batteries that distribute power to lighting, motor, and appliance circuits.

**52. 46 CFR 129.390(d)**

Two comments requested that this paragraph be modified to allow an OSV power source and shore power to operate simultaneously to prevent "blackout" when transferring power between the OSV's power source and the shore power. The Coast Guard agrees in part and has revised § 129.390(d) to permit momentary paralleling of the OSV power and the shore base power in cases where the system devices have this capability. However, the Coast Guard supports paragraph (d) as written for circuit breakers not designed for momentary paralleling, because prohibiting paralleling of the shore and OSV power sources will prevent problems due to improper phase sequencing and synchronizing.

**53. 46 CFR 129.395**

Two comments stated that providing a separate circuit with overcurrent protection at the switchboard for all radios would add undue complexity to the main switchboard. They pointed out that most radio installations are powered by batteries charged from the pilot house lighting panel circuit. The Coast Guard agrees in part and has revised this section so that only one radio installation needs to be powered by an entirely independent feeder circuit with overcurrent protection.

**54. 46 CFR 129.560**

Section 129.560 has been changed to reflect that not all OSVs need to carry an engine-order telegraph, provided the propulsion plant is controlled only from the wheelhouse.

**55. 46 CFR 130.110**

Two comments stated that the requirement for a fixed means of communication between the pilothouse and the auxiliary steering station for OSVs of less than 100 gross tons was unnecessary. The Coast Guard does not agree. When the main steering fails and auxiliary steering is being operated from a location without outside vision, it is imperative that the auxiliary steering operator be instructed by someone in a location with complete surrounding vision, such as the pilothouse.

**56. 46 CFR 130.120(a)(2)**

Two comments stated that § 130.120(a)(2) would impose additional requirements and would not be practicable for any OSV, let alone one under 100 gross tons. As stated in the interim rule, each OSV must have a means, at each propulsion engine, of readily disabling the propulsion-control system to permit local operation. It is imperative that engine control be "locked out" from the pilothouse and only local control be permitted when maintenance or adjustments are being performed to the engine. This is necessary to ensure that inadvertent operations are not engaged at the pilothouse controls, which might cause injury when a mechanic is working on the engine. The new interim rule for small passenger vessels subchapter T, at § 184.620(a)(1), has a requirement similar to that in § 130.120(a)(1). This paragraph remains unchanged.

**57. 46 CFR 130.120(d)**

Two comments suggested that this paragraph be deleted to avoid unnecessary redundancy. For safety reasons, however, this requirement is necessary to ensure that a failure in the propulsion control system will not cause the OSV to accelerate and move forward or aft uncontrollably into a fixed platform or pier. This paragraph has been modified. It now only requires the system be designed so that failure of an easily replaceable component of the propulsion engine will not cause the engine to overspeed or the pitch of the propeller to increase. This modification is in line with Coast Guard requirements for other similar vessels.

**58. 46 CFR 130.130**

Two comments recommended that the requirements in this section be replaced

by the old ones of subpart 182.30 for small passenger vessels. Subpart 182.30 has since been revised, and is now replaced by subpart F of the new subchapter T. The requirements in § 130.130 are similar to those in subpart F. Therefore, this section is unchanged.

**59. 46 CFR 130.140(b)(9)**

Two comments stated that this paragraph did not adequately address the varied steering system technologies currently in use aboard OSVs. Because a single rule cannot address all the new technologies being developed, the Coast Guard will accept any fittings, material, or equipment, that provide an equivalent level of safety under § 125.170.

**60. 46 CFR 130.140(c)**

Two comments suggested modifying § 130.140(c) by replacing the words "one set of piping" with "a common piping system", so as to eliminate the perception that separate piping might be implied for the pumps, helm, and cylinders. The Coast Guard agrees that this change would help clarify that a single piping system is acceptable for the pumps, helm, and cylinders, and has incorporated this change.

**61. 46 CFR 130.230**

In an effort to facilitate obtaining the required equipment and reduce the burden on the industry, the Coast Guard is moving toward accepting readily available equipment which is designed and used for purposes similar to those for which the Coast Guard has developed specific requirements. Consequently, the Coast Guard no longer performs type approval of self-contained breathing apparatus under 46 CFR part 160, subpart 160.011.

Paragraph (a) of § 130.230 has been revised to require each self-contained breathing apparatus to be approved by the National Institute for Occupational Safety and Health (NIOSH). This should make it easier to obtain the required self-contained breathing apparatus. Paragraph (d) of the interim rule has been deleted, and the old paragraph (e) changed to the new paragraph (d).

Two comments requested that the Coast Guard permit the self-contained breathing apparatus (SCBA) that is part of the fireman's outfit required in part 133 (Lifesaving Systems) to serve as the SCBA required by this section. A fireman's outfit containing a SCBA is not required in part 133, but may be fitted as an extra if the owner wishes. This paragraph has been revised to clarify that a SCBA, if fitted, may be used to meet the requirements of this section.

**62. 46 CFR 130.240**

One comment considered the incorporation of ABS Rules for anchors and chains excessive for domestic service because OSVs operating in the U.S. Gulf of Mexico are not subject to extreme weather conditions such as that in the North Sea. The Coast Guard does not agree. Hurricanes aside, the U.S. Gulf of Mexico can have thunderstorms with 60 to 70 mile per hour (mph) winds making it necessary for OSVs to have proper mooring equipment for emergencies. ABS Rules pertaining to length are necessary because OSVs, when moored or anchored close to offshore fixed platforms, are in dangerous surroundings. For example, storms often create a high risk for collisions between OSVs and offshore fixed platforms. OSVs may, however, comply with rules from other classification societies instead of ABS Rules, upon approval of the Commandant (G-MSE).

Three comments considered ABS Rules for anchors and chains excessive and impractical for OSVs of less than 100 gross tons. They requested that OSVs of 100 or less gross tons be permitted to meet the anchor and rope requirements of subchapter T. The Coast Guard agrees that for small vessels of less than 100 gross tons, the ABS requirements may be excessive and that the requirements of subchapter T are adequate. Section 130.240 has been revised and applies only to OSVs of 100 or more gross tons. A new section, § 130.250, has been added and applies only to OSVs of less than 100 gross tons.

**63. 46 CFR 130.410(c)**

Two comments considered § 130.410(c) excessive and suggested that periodic safety tests similar to those in § 61.40-6 be applied instead. The Coast Guard agrees in part. The responsibility to conduct, at periodic intervals, tests to confirm that automated systems continue to operate in a safe, reliable manner is the responsibility of the master and owner; additional regulations are not necessary. Section 130.410(c) has been deleted, and nothing has been added.

**64. 46 CFR 130.460(a)(4)**

Two comments suggested that the "bilge alarm" requirement of this paragraph be relocated to a general service alarm section. Section 130.460(a) requires visible and audible alarms to be installed in the pilothouse. They may be located in other panels, one of which may be a general service alarm panel, provided it is in the pilothouse.

**65. 46 CFR 131.220(g)**

Two comments requested that the draft-indicating system required by § 131.220(g) be deleted because OSVs are not commonly fitted with such devices. Although OSVs are not generally fitted with draft-indicating systems, all vessels must be designed so that draft marks may be read at sea in order to calculate the vessel's displacement and stability condition in an emergency. If draft marks are obscured, restricting determination of the draft from the weather deck or another easily accessible location, then an alternative reliable means of reading the drafts must be fitted.

**66. 46 CFR 131.330**

Two comments stated that it may not be practical for the master of an OSV to personally "prepare and post" placards and suggested that this section be revised to indicate that "durable emergency instruction placards shall be posted in conspicuous locations." Although it is the master's responsibility to see that the placards are prepared and posted, it is not necessary that he or she personally perform the task; he or she may delegate the task to another member of the crew.

**67. 46 CFR Part 131—Operations. Subpart D—Sufficiency and Supervision of Crew of Survival Craft**

Two comments requested that subpart D be deleted in its entirety and that operational requirements be included in part 133 (Lifesaving Systems). Although part 133 contains the general and specific requirements for lifesaving equipment, such as the number and design criteria of survival craft, it does not address operational requirements. The Coast Guard contends that the operational requirements for survival craft are properly located within subpart D.

**68. 46 CFR 131.510**

Two comments stated that § 131.510 did not seem warranted and requested that it be removed. The Coast Guard disagrees. It is important that the drafts be recorded when leaving port because draft is one of the main parameters of the stability condition required by § 131.513. It is also important that the position of the loadline markings with respect to the waterline be recorded to verify that the vessel is not loaded deeper than the permitted loadline draft. Additionally, these recordings are necessary for accident investigations.

**69. 46 CFR 131.513**

Two comments stated that the requirements of § 131.513 were not



warranted. Section 131.513 is included because of its similarity to requirements in § 97.15-7 of subchapter I (Cargo and Miscellaneous Vessels), § 35.20-7 of subchapter D (Tank Vessels), and § 109.227 of subchapter I-A (Mobile Offshore Drilling Units), all of which were promulgated by the Coast Guard under a final rule entitled "Stability Design and Operational Regulations (57 FR 41812; September 11, 1992). This final rule amended stability design and operational regulations for inspected vessels to incorporate recent amendments to the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS).

**70. 46 CFR 131.530(d)(4)**

Two comments stated that the inflation of a liferaft on a 4-month interval is not practical and suggested instead that a drill for those liferafts be completed prior to their inspection dates. The Coast Guard disagrees. It is important that training be performed so crew members are knowledgeable in the use of davit-launching inflatable liferafts. The regulation allows a training raft to be used instead of the vessel's own liferafts and also allows some leeway in when the inflation and lowering must be done. Training intervals coinciding with the reinspection of the vessel's liferafts can be used.

**71. 46 CFR 131.545(e)**

Two comments stated that this paragraph should not require OSVs in transit to carry 200 percent of lifeboats and rigid liferafts on board while maintaining or repairing primary lifeboats and liferafts as in § 94.10-10(a) for vessels of 500 gross tons and over. Rather the comments suggested that this paragraph require the carriage of 100 percent of lifeboats and rigid liferafts as in § 94.10-10(b) for vessels of less than 500 gross tons. The Coast Guard agrees and has changed this paragraph accordingly.

**72. 46 CFR 131.580**

The Coast Guard has modified § 131.580(a) to allow new inflatable liferafts and buoyant apparatus to be two years old before the first servicing is required.

Two comments questioned the requirement in § 131.580(e), that "each repair, except an emergency repair made aboard an OSV", must be made at servicing facilities approved by the Commandant (G-MSE). The comments stated that routine repairs of inflatable rescue boats made aboard OSVs by the crew are common industry practice. They should not be. Repairs and

maintenance of rescue craft must be performed by approved servicing facilities to ensure that qualified personnel, familiar with the equipment, make the repairs and use the proper manufacturers' parts.

**73. 46 CFR 131.730(b)**

Two comments questioned why it was necessary to label each space containing work vests, as it is common practice aboard OSVs to stow the work vests either in a common area such as the passageway to the weather deck or in the staterooms of the individual crew members. The Coast Guard has reviewed this requirement and decided that it is not necessary to label each space where work vests are stowed since each vest must be labeled under § 160.053-5(b); therefore, § 131.730(b) has been deleted.

**74. 46 CFR 131.855**

This section has been revised to make it align with § 199.176 of the Lifesaving Equipment interim rule. The size of the lettering in paragraphs (a), (b) and (c) has been removed. The requirement to paint the name of the OSV on the oars and paddles has also been removed. Paragraph (e) is renamed (d) as old paragraph (d) has been removed. Paragraph (c)(1) has been revised to require the number of the boat, rather than the number of persons the boat will hold, to be marked on the lifeboat and rescue boat.

**75. 46 CFR 131.885**

Section 131.885 has been removed as portable magazine chests no longer are required by Coast Guard regulations.

**76. 46 CFR 131.935**

Two comments stated that the language in § 97.75-1 was preferable to that in this section. The Coast Guard agrees. It has reverted to language in § 97.75-1, similar to that used in the NPRM.

**77. 46 CFR 131.860**

This section, like that of § 131.855, has been revised to make it align with § 199.176 of the Lifesaving Equipment interim rule. The size of the lettering in paragraphs (a) and (b) has been removed. Paragraph (a)(2), concerning the requirements for the number of the rigid liferaft, has been removed. Paragraph (a)(3) has now been renumbered (a)(2) since old (a)(2) has been removed. Old paragraph (d), concerning the requirement to paint the OSV name on the oars and paddles, has been removed, and a new paragraph (d) added. New paragraph (d) requires rigid liferafts to be marked to show whether

they are fitted with a "SOLAS A pack" or a "SOLAS B pack".

**78. 46 CFR 131.960**

Two comments stated that the language in § 97.16-1 was preferable to that in this section and questioned the need to redraft an existing regulation. The Coast Guard agrees. It has reverted to language in § 97.16-1, similar to that used in the NPRM.

One comment understood § 131.960 to require automatic pilot controls aboard OSVs. The comment recommended that this section be revised to read as follows: "If a vessel is equipped with an automatic pilot and is operating with the automatic pilot in use, the master shall ensure \* \* \*." To clarify, this section does not require that an automatic pilot be fitted aboard OSVs; however, if an automatic pilot is voluntarily fitted, it must comply with this section.

**79. 46 CFR 132.120**

One comment stated that the requirement for a self-priming, power-driven fire pump was in excess of requirements contained in subchapter I, ABS Rules, SOLAS, and International Association of Classification Societies (IACS) and suggested that it be deleted. Subchapter I vessels are permitted to carry much less oil (only 20 percent of their deadweight) than OSVs under subchapter L (unlimited amount). Unlike tank vessels, OSVs require no special or additional firefighting equipment. The Coast Guard has determined that self-priming, power-driven fire pumps are necessary to ensure that primary firefighting equipment will function in light of the greater risk of fire due to the greater amount of oil on board OSVs.

**80. 46 CFR 132.120(g)**

Two comments requested the inclusion of § 95.10-5(f) of subchapter I, which allows branch piping to be connected to the fire main for other purposes if "specifically approved by the Commandant." Currently, § 132.120(g) permits branch lines to be connected to the fire main for the purpose of washing decks or anchors. Since, under subchapter L, OSVs may now carry both unlimited fuel oil without any special firefighting equipment and 36 offshore workers in addition to the crew, it is the Coast Guard's opinion that additional branch connections to the fire main would increase the probability that the fire main would not work when needed to fight a fire. This would introduce an unacceptable risk of death or injury to

the crew and offshore workers. This paragraph remains unchanged.

**81. 46 CFR 132.120(k)**

The Coast Guard has added a new paragraph (k) to § 132.120, which is similar to § 181.300(e) in subchapter T. This new paragraph requires that a fire pump have the capability to be operated either from a remote station or locally from the pump itself. This requirement was inadvertently omitted from the interim rule.

**82. 46 CFR 134.140(a)**

Several comments pointed out that NVIC 8-91 requires steady wind speeds of 70 knots for structural design criteria for liftboats while § 132.140(a) requires steady wind speeds of 100 knots. The comments pointed out that meeting the 100-knot criteria would result in larger hulls with heavier legs, thereby, so increasing the cost of a liftboat. The Coast Guard agrees that a 100 knot criteria for all structural calculations for liftboats in restricted areas of operations is excessive. A 70-knot criteria would serve under normal operating conditions, and a 100-knot criteria would serve under severe storm conditions. This is in line with the requirements for on-bottom stability for restricted service in § 174.255(c) and section 3/2.1.2 of ABS Rules.

The comments also pointed out that NVIC 8-91 permits a reduction in wind speed criteria for leg strength to 50 knots, provided this design limitation is highlighted in the operating manual. This reduction in NVIC 8-91 was designed to accommodate existing liftboats. However, it is inappropriate for new liftboats, because, even ignoring hurricanes, the Gulf of Mexico can have thunderstorms with 70 mph winds. This paragraph now allows a 70-knot criteria for liftboats in restricted areas under normal operating conditions, but requires a 100-knot criteria under severe storm conditions.

**83. 46 CFR 134.140(a)(3)**

One comment pointed out that the use of an effective-length factor ("K") of not less than 2.0 could be overly conservative, depending on the complexity of the design. The Coast Guard agrees that if a detailed structural leg analysis is performed, taking into account all factors such as hull and sea bed fixity, a "K" factor of less than 2.0 may be used. This paragraph has been revised to allow the use of a "K" factor of less than 2.0, provided that both a detailed structural leg analysis is performed and prior approval has been granted by the Commandant (G-MSE).

**84. 46 CFR 134.170(b)**

The Coast Guard added items (15) and (16) to § 134.170(b) since they were inadvertently omitted from the interim rule. They are not additional or new requirements as they are required to be produced elsewhere in the regulations; they are needed for the master's use while calculating the vessel's stability.

**85. 46 CFR 134.180(b)**

Two comments pointed out that § 56.60-25(c) restricts the use of non-metallic hoses to lengths of 760 millimeters (30 inches), which is insufficient for fire pump suction lines outside the hull when a liftboat is in the jacked-up mode. The comments requested that this paragraph be revised to permit the use of non-metallic hoses with lengths greater than 760 millimeters (30 inches) outside the hull. The Coast Guard agrees and has revised paragraph (c) to permit the use of non-metallic hoses outside the hull in unlimited lengths.

**86. 46 CFR 174.185(f)**

One comment pointed out that this paragraph did not allow the righting arms of an OSV to be calculated using the fixed trim method although this method has been used for calculating the righting arms for OSVs for decades. The NPRM proposed allowing the righting arms values to be calculated using either the constant trim or the fixed trim method. This final rule allows the use of the two alternative methods as proposed in the NPRM, by revising § 174.185(f) and adding paragraph (g).

**87. 46 CFR 174.195**

One comment stated that meeting the requirement to keep ventilation trunks, above the main deck, inboard at least 760 millimeters (30 inches) from the vessel's side would be difficult and expensive. The comment suggested that this section be revised to allow ventilation trunks above the main deck to be located outboard of 760 millimeters (30 inches) from the vessel's side. The Coast Guard acknowledges that cargo space increases as the trunks are located outboard of 760 millimeters (30 inches); however, the added damaged stability criteria for OSVs requires a side penetration of 760 millimeters (30 inches) from baseline upwards without limit. Any trunk outboard of 760 millimeters (30 inches) would, if damaged, cause flooding into the machinery space. For this reason, all trunks must be inboard of the 760 millimeters (30 inches) line from the vessel's side.

**88. 46 CFR 174.200 and 174.205**

The Coast Guard received several comments from owners, industry, and designers concerning the damaged stability requirements in §§ 174.200 and 174.205 of the interim rule. It was stated that these sections are confusing and unclear as to the different requirements applicable between OSVs carrying 16 or less offshore workers and OSVs carrying more than 16 offshore workers. Although the Coast Guard agrees that the layout and presentation of the two sections could be revised for clarity, it contends that the requirements are sound. The layout and presentation of the damaged stability requirements has been revised by applying § 174.200 to all OSVs and applying § 174.205 only to OSVs carrying more than 16 offshore workers. A new § 174.207, stating the damaged stability criteria applicable to both sections, has also been added.

**89. 46 CFR 174.200**

One comment asked whether it was the intent of the interim rule to require a damaged stability analysis with the machinery space flooded. As stated in § 174.205(c) and Table 174.205(b) of the interim rule (Table 174.207(a) of the final rule), the permissible transverse extent of damage is 760 millimeters (30 inches). Therefore, if the machinery space has longitudinal wing bulkheads reaching at least 760 millimeters (30 inches) inboard from the outside shell, then the analysis need not consider damage to the complete machinery space, only damage to the wing spaces need be considered. Bottom damage inboard of these wing bulkheads is also not required.

A separate comment asked whether it was the intent of the interim rule to consider damage to a watertight bulkhead within a single machinery space rather than damage to a watertight bulkhead between two machinery spaces. To clarify, if a single machinery space has additional transverse bulkheads within its boundary transverse bulkheads, such as transverse bulkheads within outside wing spaces, then consider only the space between these bulkheads to be damaged. However, the bulkheads must be spaced far enough apart to comply with the longitudinal extent of damage stated in Table 174.205(b) of the interim rule (Table 174.207(a) of the final rule). If there are two machinery spaces with transverse watertight bulkheads spaced farther apart than the longitudinal extent of damage, then do not consider the bulkhead between them to be damaged.

**90. 46 CFR 174.205(b)**

One comment pointed out that the vertical extent of damage in Table 174.205(b) of the interim rule (Table 174.207(a) of the final rule) was in excess of IMO Resolution A.469, Guidelines for the Design and Operations of Offshore Supply Vessels. The comment argued that if "it is the goal of this subchapter to eliminate an unwarranted differential between domestic rules and international standards," the criteria for OSVs carrying over 16 offshore workers should follow the guidelines in IMO Resolution A.469. Item 4 of the preamble to Resolution A.469, Guidelines for the Design and Construction of Offshore Supply Vessels, states "Provisions for offshore supply vessels carrying more than 12 industrial personnel are not included in these Guidelines." Subchapter L facilitates the carriage of 36, not 12, offshore workers and some of its criteria may be proportionally more stringent than that in IMO A.469. Since the IMO guidelines are written for less than 12 industrial personnel there is no unwarranted differential.

**91. 46 CFR 175.400 (46 CFR 175.10-40 of the Interim Rule)**

Due to the changes brought about by the interim rule on subchapter T, the section number has been changed to § 175.400. The definition of "Offshore supply vessel (OSV)" in § 175.400 has been changed to include the amendments of the December 18, 1996 interpretative rule "Offshore Supply Vessels; Alternate Tonnage" (61 FR 66613), similar to the change in § 125.160. The definitions constituting "Existing OSV" and "New OSV" are identical to their counterparts in §§ 90.10-40 (b) and (c), and 125.160.

**General Comments**

Three comments discussed the Coast Guard's intention to use metric units in this final rule and recommended keeping British units, since they are customary within the OSV industry. The Coast Guard agrees in part. The final rule uses the "soft metric" conversion, in which the metric values appear first followed by the British system equivalent.

Many comments requested the inclusion of crew boats within subchapter L, and suggested requirements for crew boats different from those for OSVs. During the development of subchapter L, the Coast Guard received comments requesting the increase of the maximum number of offshore workers that an OSV may carry

from 16 to 36. This final rule permits an OSV to carry 36 offshore workers in addition to the crew, provided additional damaged stability requirements are met. Previously, under 46 U.S.C. sections 2101 (22) and (35), an OSV could not be a passenger-carrying vessel, but because it was necessary for OSVs to carry 36 offshore workers, Congress changed the definition of "passenger" so as not to include offshore workers. The Passenger Vessel Safety Act of 1993 contains the new definition. However, OSVs may not carry "passengers" or more than 36 offshore workers. Crew boats carrying either "passengers" or more than 36 offshore workers will not be certificated as OSVs; and therefore, must be certificated as small passenger vessels under subchapters T or K.

As addressed under "Associated Regulatory Projects", the Coast Guard published, on December 18, 1996, an interpretative rule entitled "Offshore Supply Vessels; Alternate Tonnage". This rule established the use of a tonnage system under 46 U.S.C. 14302 based on the International Convention on Tonnage Measurement (convention measurement) as an alternative to the national tonnage system under 46 U.S.C. 14502 (regulatory measurement). However, in order to expedite the rulemaking, the Coast Guard established only an alternate tonnage for the maximum size OSV of 6,000 gross tons. The Coast Guard is considering a supplemental rulemaking to establish intermediate tonnage thresholds, and additional standards for the potentially larger OSVs.

**Incorporation by Reference**

The Director of the Federal Register has approved the material in § 125.180 for incorporation by reference under 5 U.S.C. 552 and 1 CFR part 51. Copies of the material are available from the sources listed in that section.

**Metric (SI) Conversion**

This final rule has been revised to include metric units using the International System of Units (SI), with the exception of nautical miles and knots. The metric value is immediately followed, in parenthesis, by the British value, throughout the rule.

**Assessment**

This final rule is a significant regulatory action under section 3(f) of Executive Order 12866 and has been reviewed by the Office of Management and Budget under that Order. It requires an assessment of potential costs and benefits under section 6(a)(3) of that Order. It is significant under the

regulatory policies and procedures of the Department of Transportation (44 FR 11040, February 26, 1979). An Assessment is available in the docket for inspection and copying ADDRESSES. A summary of the Assessment follows.

As of April 1996, according to the U.S. Coast Guard Marine Safety Management System (MSMS) databases, there were 584 OSVs certificated, 407 of which were of 100 or more gross tons. In evaluating the effect of this final rule, the Coast Guard considered all costs and benefits of this final rule in present value dollars.

The direct monetary benefits determined for this rule have been based upon the dollar values from casualty reports associated with causal factors for OSV (including liftboat) casualties occurring from 1985 to 1995, combined with the costs saved on requirements that have been relaxed in the regulation. This final rule will eliminate requirements that create an unwarranted differential between domestic rules and international standards.

The regulatory changes made by this final rule will reduce the burden of compliance and therefore the cost of this rulemaking. Because the cost reductions are not considered significant, these were not included in the regulatory evaluation addendum adopted as final.

For conventional OSVs and liftboats, the Coast Guard estimates that the 11-year undiscounted costs attributable to compliance with this rule will total \$91,281,190. The 11-year present-value costs, discounted at 7 percent, will total \$62,226,174. Annually, the one-time costs for newly-built conventional OSVs of less than 100 gross tons are estimated at \$760,320, based on 16 newly-built OSVs per year. For each OSV of less than 100 gross tons, the additional cost to comply with subchapter L requirements is estimated at \$47,520. Annually, the one-time costs for newly-built conventional OSVs of more than 100 gross tons are estimated at \$3,137,970, based on 37 newly-built OSVs per year. For each OSV of more than 100 gross tons, the additional cost to comply with subchapter L therefore the cost of this rulemaking. Because the cost reductions are not considered requirements is estimated at \$84,810.

Requirements for liftboats associated with this final rule include the following:

1. Submittal of plans to the Coast Guard.
2. Preparation and submittal of a comprehensive operating manual to the Coast Guard.

3. Design and construction of a fail-safe jacking-system.
4. Piping for fire-main suction while the liftboat is elevated.
5. Compliance with stricter requirements for lifesaving equipment.
6. Compliance with engineering costs associated with leg design.
7. Compliance with engineering costs associated with intact and damaged stability.

Annually, the one-time costs for newly-built liftboats of less than 100 gross tons are estimated at \$1,430,000, based on 13 newly-built liftboats per year. For each liftboat of less than 100 gross tons, the additional cost to comply with subchapter L requirements is estimated at \$110,000. Annually, the one-time costs for newly-built liftboats of 100 or more gross tons are estimated at \$2,970,000, based on 9 newly-built liftboats per year. For each liftboat of 100 or more gross tons, the additional cost to comply with subchapter L requirements is estimated at \$330,000.

New liftboats would enjoy some benefits due to the acceptance of comments to the interim rule, such as the allowance of 70-knot wind criteria in the calculation of stability, and accepting smaller anchors and chains for vessels of 100 gross tons and less. These cost reductions have not been included in the regulatory assessment, as they are minor and in some cases unquantifiable.

It should be noted that the benefit estimates in this evaluation reflect certain simplifying assumptions that could be relaxed to provide more refined estimates. The subchapter L damage estimates (Appendix IV) reflect actual dollar values (1985-95) in the year of occurrence. They have not been inflated to reflect current (1997) dollar values. In addition, the aggregate benefit estimates implicitly assume the regulation would be 100 percent effective in reducing damages, deaths, and injuries of the kind that were incurred during 1985-95. Changes in these two assumptions would tend to raise and lower, respectively, the benefit estimates in this document.

It should also be noted that even if the rules were only 75 percent effective in reducing or eliminating the casualties of the type incurred during 1985-95, the rule would be cost-beneficial in that present value benefits would exceed present value costs.

The benefits, comprised of net cost savings attributable to the final rule combined with dollar values from casualties related to causal factors of OSVs and liftboats will total \$144,818,410. The 11-year present value of the benefits will total \$98,722,372.

This figure reflects a 7-percent discount to 1996 of the projected future estimated benefits of this final rule.

The cost-benefit ratio attributable to the final rule is \$62,226,174 of costs and \$98,722,372 of benefits, which equates to \$1.59 of benefits for each dollar of cost.

**Small Entities**

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), the Coast Guard considered whether this final rule will have a significant economic impact on a substantial number of small entities. "Small entities" include small businesses, not-for-profit organizations that are independently owned and operated are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000. No comments submitted to the public docket addressed small entities.

Whenever possible, requirements have been adjusted to the size of the vessel and, in some cases, a relaxation of requirements for smaller vessels (less than 100 gross tons) has been offered. Due to the flexibility of requirements in these rules and the reduction of regulatory burden, small entities involved in the building or ownership of OSVs should not be adversely affected by these rules and may experience increases in business opportunities.

Independent ownership of OSVs, by approximately 70 corporate persons, accounts for about 14 percent of existing conventional OSVs. The Coast Guard does not anticipate individual ownership of more than 20 new conventional OSVs. This figure comes from the assumption that those 20 will likewise account for about 14 percent of the anticipated 140 new conventional OSVs built within the next 3 years. Marginal, one-time, out-of-pocket expense for initial construction will not exceed 2.5 percent, as previously discussed, even if operational improvements in safety or flexibility are not realized.

Individual ownership of liftboats, by five corporate persons, accounts for about 2 percent of existing liftboats. The Coast Guard does not anticipate the individual ownership of more than one new liftboat. This figure comes from the assumption that they would likewise account for about 2 percent of the anticipated new liftboats built within the next 11 years. Marginal, one-time, out-of-pocket expense for initial construction will not exceed 10 percent even if operational improvements in safety or flexibility are not realized.

The Coast Guard anticipates that the additional expenses for initial

construction would not exceed 2.5 percent, even if the operational flexibility or safety improvements for this regulation were not implemented. In the case of liftboats, the additional construction costs would be approximately 5 percent of the estimated initial construction cost for newbuilts. There are no recurring costs to liftboat operators based upon these regulations. Therefore, the Coast Guard certifies under section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) that this final rule will not have a significant economic impact on a number of small entities.

**Assistance for Small Entities**

In accordance with section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104-121), the Coast Guard will provide assistance to small entities to determine how this proposed rule applies to them. If you are a small business and need assistance understanding the provisions of the proposed rule, please contact Mr. James M. Magill, Vessel and Facility Operating Standards Division (G-MSO-2), U.S. Coast Guard Headquarters, 2100 Second Street, SW., Washington, DC 20593-0001, (202) 267-1082.

**Collection of Information**

This final rule contains collection-of-information requirements. The Coast Guard has submitted the requirements to the Office of Management and Budget (OMB) for review under section 3504(h) of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), and OMB has approved them. The section numbers are—

- 126.120
- 126.140
- 126.150
- 126.160
- 126.230
- 126.240
- 126.260
- 126.270
- 126.320
- 126.330
- 126.420
- 126.510
- 126.530
- 127.100
- 127.110
- 127.210
- 128.120
- 128.210
- 128.220
- 128.240
- 129.220
- 129.320
- 129.375
- 130.130
- 130.330

130.480  
 131.110  
 131.210  
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 131.885  
 131.890  
 131.893  
 131.896  
 131.899  
 131.930  
 131.945  
 131.950  
 131.955  
 132.110  
 132.130  
 132.210  
 132.220  
 132.360  
 134.130  
 134.140  
 134.160  
 134.170  
 174.210  
 174.255

The corresponding OMB approval number is OMB Control Number 2115-0592. The Streamlined Inspection Program notice of proposed rulemaking (CGD 96-055) currently under development will be revising this

information collection to implement technical corrections and to incorporate new information requirements.

**Federalism**

The Coast Guard has analyzed this final rule under the principles and criteria contained in Executive Order 12612, and has determined that this final rule does not have sufficient implications for federalism to warrant the preparation of a Federalism Assessment.

**Environment**

The Coast Guard considered the environmental impact of this final rule and concluded that, under paragraph 2.B.2 of Commandant Instruction M16475.1B, the rule is categorically excluded from further environmental documentation. This final rule is a matter of editorial and procedural changes and of manning, documentation, admeasurement, inspection, and equipping of vessels within the meaning of subparagraphs (a) and (d) of 2.B.2.34(e) of Commandant Instruction M16475.1B, and clearly has no environmental impact. A "Categorical Exclusion Determination" is available in the docket for inspection or copying where indicated under ADDRESSES.

**Compatibility With International Standards**

The Coast Guard has adopted a policy to evaluate current and new rules and, as far as possible, to eliminate requirements that create an unwarranted differential between domestic rules and corresponding responsible international standards. The Coast Guard has, accordingly, compared this final rule to corresponding international standards. The Coast Guard has determined that this final rule does not unnecessarily establish requirements in excess of international standards.

**List of Subjects**

*46 CFR Part 90*

Administrative practice and procedures, Authority delegation, Cargo vessels, Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Vessels.

*46 CFR Part 98*

Cargo vessels, Hazardous materials transportation, Marine safety, Reporting and recordkeeping requirements, Water pollution control.

*46 CFR Part 125*

Administrative practice and procedures, Authority delegation,

Hazardous materials transportation, Incorporation by reference, Marine safety, Offshore supply vessels, Oil and gas exploration, Vessels.

*46 CFR Part 126*

Authority delegation, Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Reporting and recordkeeping requirements, Vessels.

*46 CFR Part 127*

Authority delegation, Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Reporting and recordkeeping requirements, Vessels.

*46 CFR Part 128*

Hazardous materials transportation, Main and auxiliary machinery, Marine safety, Offshore supply vessels, Oil and gas exploration, Vessels.

*46 CFR Part 129*

Electric power, Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Vessels.

*46 CFR Part 130*

Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Vessels, Vessel control and automation.

*46 CFR Part 131*

Hazardous materials transportation, Marine safety, Navigation (water), Offshore supply vessels, Oil and gas exploration, Operations, Penalties, Reporting and recordkeeping requirements, Vessels.

*46 CFR Part 132*

Fire prevention, Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Vessels.

*46 CFR Part 134*

Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Provisions for liftboats, Vessels.

*46 CFR Part 170*

Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Stability, Vessels.

*46 CFR Part 174*

Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Stability, Vessels.

## 46 CFR Part 175

Administrative practice and procedures, Authority delegation, Hazardous materials transportation, Marine safety, Offshore supply vessels, Oil and gas exploration, Passenger vessels, Reporting and recordkeeping requirements.

For the reasons set out in the preamble, the Coast Guard adopts the interim rule amending 46 CFR parts 90, 98, 125, 126, 127, 128, 129, 130, 131, 132, 134, 170, 174, and 175 which was published at 60 FR 57630, Nov. 16, 1995 with the following changes:

**PART 90—GENERAL PROVISIONS**

1. The authority citation for part 90 continues to read as follows:

**Authority:** 46 U.S.C. 3306, 3703; 49 U.S.C. 5103, 5106; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

2. Revise § 90.05–20 to read as follows:

**§ 90.05–20 Applicability to offshore supply vessels.**

(a) Existing offshore supply vessels as defined by § 90.10–40(b), if they are of 100 or more but of less than 500 gross tons, are subject to inspection under this subchapter. New offshore supply vessels as defined by § 90.10–40(c), are subject to inspection under subchapter L of this chapter.

(b) Each offshore supply vessel permitted grandfathering under paragraph (a) of this section must complete construction and have a Certificate of Inspection by March 16, 1998.

3. Revise § 90.10–40 to read as follows:

**§ 90.10–40 Offshore supply vessels.**

(a) An offshore supply vessel is a vessel that is propelled by machinery other than steam, that is of 15 gross tons and less than 500 gross tons (as measured under the Standard, Dual, or Simplified Measurement System under part 69, subpart C, D, or E, of this chapter) or is less than 6,000 gross tons (as measured under the Convention Measurement System under part 69, subpart B, of this chapter) and that regularly carries goods, supplies or equipment in support of exploration, exploitation, or production of offshore mineral or energy resources.

(b) An existing offshore supply vessel is one contracted for, or the keel of which was laid, before March 15, 1996.

(c) A new offshore supply vessel is one—

(1) That was contracted for, or the keel of which was laid, on or after March 15, 1996; or

(2) That underwent a major conversion initiated on or after March 15, 1996.

**PART 98—SPECIAL CONSTRUCTION, ARRANGEMENT, AND OTHER PROVISIONS FOR CERTAIN DANGEROUS CARGOES IN BULK**

4.–5. The authority citation for part 98 continues to read as follows:

**Authority:** 33 U.S.C. 1903; 46 U.S.C. 3306, 3703; 49 U.S.C. App. 1804; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

6. Add subpart 98.31, consisting of §§ 98.31–5, 98.31–10, and 98.31–15, to read as follows:

**Subpart 98.31—Control of Pollution From NLS Cargoes on Oceangoing Offshore Supply Vessels****§ 98.31–5 Applicability.**

This subpart applies to each offshore supply vessel contracted for, or the keel of which was laid, before March 15, 1996, that is oceangoing as defined in 33 CFR 151.05(j) and that carries noxious liquid substances (NLSs) as defined in § 153.2 of this chapter in bulk, including carriage in portable tanks.

**§ 98.31–10 Certificate of inspection and NLS certificate endorsements.**

(a) The Coast Guard issues the endorsed Certificate of Inspection or NLS Certificate required by § 98.31–15 for every vessel under this subpart to carry NLSs if the vessel—

(1) Has the Cargo Record Book prescribed in § 153.490(a)(1) of this chapter; and

(2) Unless it discharges no NLS residues as defined in § 153.2 of this chapter to the sea, meets the requirements in §§ 153.470 through 153.491 of this chapter.

(b) Each vessel under this subpart that does not meet the requirements in §§ 153.470 through 153.491 of this chapter must have a statement on its Certificate of Inspection or NLS Certificate stating that the vessel is prohibited from discharging NLS residues to the sea.

**§ 98.31–15 Operating requirements.**

No person may operate a vessel that carries a bulk liquid cargo of NLS unless the vessel—

(a) Has on board a Certificate of Inspection and, if it is a vessel making a foreign voyage, an NLS Certificate endorsed under § 98.31–10 with the name of the NLS cargo;

(b) Discharges no NLS residues to the sea unless the vessel meets—

(1) The equipment requirements in § 98.31–10(a)(2); and

(2) The operating requirements prescribed for oceangoing ships carrying NLSs in §§ 153.901, 153.903, 153.909, and 153.1100 through 153.1132 of this chapter.

7. Revise parts 125 through 132, and part 134 to read as follows:

**Subchapter L—Offshore Supply Vessels****PART 125—GENERAL**

Sec.

125.100 Applicability.

125.110 Carriage of flammable or combustible liquid cargoes in bulk.

125.120 Carriage of noxious liquid substances in bulk.

125.130 Carriage of packaged hazardous materials.

125.140 Loadlines.

125.150 Lifesaving systems.

125.160 Definitions.

125.170 Equivalents.

125.180 Incorporation by reference.

125.190 Right of appeal.

**Authority:** 46 U.S.C. 2103, 3306, 3307; 49 U.S.C. App. 1804; 49 CFR 1.46.

**§ 125.100 Applicability.**

(a) Except as provided by paragraph (c) of this section, this subchapter applies to each offshore supply vessel (OSV) of United States flag contracted for, or the keel of which was laid, on or after March 15, 1996.

(b) Each OSV contracted for, or the keel of which was laid, before March 15, 1996, must be constructed and inspected to comply with—

(1) The regulations in effect until March 15, 1996 (46

CFR subchapter I or subchapter T, as appropriate), as they existed at the time of construction; or

(2) The regulations in this subchapter.

(c) Each OSV permitted grandfathering under paragraph (b)(1) of this section must complete construction and have a Certificate of Inspection by March 16, 1998.

(d) Certain regulations in this subchapter apply only to limited categories of OSVs. Specific statements of applicability appear at the beginnings of those regulations.

(e) As used in this subchapter, the term “vessels contracted for” refers not only to the contracting for the construction of a vessel, but also to the contracting for a major alteration to a vessel, the contracting for the conversion of a vessel to an offshore supply vessel or liftboat, and the changing of service or route of a vessel if such changing increases or modifies the general requirements for the vessel or increases the hazards to which it might be subjected.

**Note:** Navigation and Vessel Inspection Circular 8–91, “Initial and Subsequent

Inspection of Uncertificated Existing Offshore Supply Vessels, Including Liftboats", contains guidance on how to apply the regulations in 46 CFR subchapters I and T to OSVs.

**§ 125.110 Carriage of flammable or combustible liquid cargoes in bulk.**

(a) Except as provided by this section, no OSV may carry flammable or combustible liquid cargoes in bulk without the approval of the Commandant (G-MSE).

(b) An OSV may carry the following in integral tanks:

(1) Grade-D combustible liquids listed by § 30.25-1 of this chapter, in quantities not to exceed 20 percent of the vessel's deadweight, except that the vessel may carry drilling fluids and excess fuel oil, Grade-E as well as Grade-D, without limit.

(2) Grade-E combustible liquids listed by § 30.25-1 of this chapter, in quantities not to exceed 20 percent of the vessel's deadweight, except that the vessel may carry drilling fluids and excess fuel oil, Grade-D as well as Grade-E, without limit.

(c) An OSV may carry the following in fixed independent tanks on deck: Grade-B and lower-grade flammable and combustible liquids listed by § 30.25-1 of this chapter, in quantities not to exceed 20 percent of the vessel's deadweight.

(d) An OSV may carry hazardous materials in portable tanks, in compliance with part 64 and subpart 98.30 of this chapter. A portable tank may be filled or discharged aboard the vessel if authorized by an endorsement on the vessel's Certificate of Inspection.

**§ 125.120 Carriage of noxious liquid substances in bulk.**

(a) Except as provided by this section, no OSV may carry a noxious liquid substance (NLS) in bulk without the approval of the Commandant (G-MSO).

(b) An OSV may carry in integral and fixed independent tanks NLSs listed by § 153.2 of this chapter, in quantities not to exceed 20 percent of the vessel's deadweight.

(c) Each OSV carrying NLSs in bulk in integral tanks or fixed independent tanks must—

(1) Meet the definition of oceangoing in 33 CFR 151.05;

(2) Have a Certificate of Inspection or NLS Certificate (issued by the Coast Guard) endorsed with the name of the NLS cargo; and

(3) Have the Cargo Record Book prescribed in § 153.490(a)(1) of this chapter.

(d) An OSV that does not meet the equipment requirements in §§ 153.470 through 153.491 of this chapter may not

discharge NLS residues to the sea. The vessel's Certificate of Inspection or NLS Certificate will contain this restriction.

(e) Each OSV that discharges NLS residues to the sea must meet—

(1) The equipment requirements in §§ 153.470 through 153.491 of this chapter; and

(2) The operating requirements in §§ 153.901, 153.903, 153.909, and 153.1100 of this chapter.

**§ 125.130 Carriage of packaged hazardous materials.**

An OSV may carry packaged hazardous materials, or hazardous materials in portable tanks, if the materials are prepared, loaded, and stowed in compliance with 49 CFR parts 171 through 179, as applicable.

**§ 125.140 Loadlines.**

For an OSV assigned a loadline, see subchapter E (Load Lines) of this chapter, for special requirements on strength, loadline markings, closure of openings, and the like.

**§ 125.150 Lifesaving systems.**

Lifesaving appliances and arrangements must comply with part 133 of this subchapter.

**§ 125.160 Definitions.**

Each term defined elsewhere in this chapter for a particular class of vessel applies to this subchapter unless a different definition is given in this section. As used by this subchapter—

*Accommodations* includes spaces such as at least the following:

- (1) A space used as a messroom.
- (2) A lounge.
- (3) A sitting area.
- (4) A recreation room.
- (5) Quarters.
- (6) A toilet space.
- (7) A shower room.

*Anti-exposure suit* means a protective suit designed for use by rescue boat crews and marine evacuation system parties.

*Approval series* means the first six digits of a number assigned by the Coast Guard to approved equipment. Where approval is based on a subpart of subchapter Q of this chapter, the approval series corresponds to the number of the subpart. A listing of approved equipment, including all of the approval series, is published periodically by the Coast Guard in Equipment Lists (COMDTINST M16714.3 series), available from the Superintendent of Documents.

*Approved* means approved by the Commandant, unless otherwise defined.

*Bulkhead deck* means the uppermost deck to which transverse watertight bulkheads and the watertight shell extend.

*Coast Guard District Commander* or *District Commander* means an officer of the Coast Guard designated by the Commandant to command activities of the Coast Guard within a Coast Guard district described by 33 CFR part 3, whose duties include the inspection, enforcement, and administration of laws for the safety and navigation of vessels. Coastwise refers to a route not more than 20 nautical miles offshore on any of the following waters:

- (1) Any ocean.
- (2) The Gulf of Mexico.
- (3) The Caribbean Sea.
- (4) The Gulf of Alaska.
- (5) The Bering Sea.
- (6) Such other, similar waters as may be designated by the District Commander.

*Combustible liquid* means the same as in subpart 30.10 of this chapter.

*Commandant* means the Commandant of the Coast Guard or an authorized staff officer at Coast Guard headquarters designated by § 1.01-05 of this chapter.

*Commanding Officer, Marine Safety Center*, means an officer of the Coast Guard designated by the Commandant to command activities of the Coast Guard within the Marine Safety Center, whose duties include review of plans for commercial vessels to ensure compliance with applicable laws and standards.

*Crane* means a revolving, gantry-mounted, or other type of fixed lifting device used for lifting or moving equipment or supplies. It does not include material handling equipment used for general ship's service, such as lifeboat davits, chain falls, come-alongs, or the like.

*Crew* means all persons carried on board the OSV to provide navigation and maintenance of the OSV, its machinery, systems, and arrangements essential for propulsion and safe navigation or to provide services for other persons on board.

*Deadweight* means, when measured in water of specific gravity 1.025, the difference in long tons between—

(1) The displacement of the vessel on even trim at "lightweight" as defined by subpart F of part 170 of this chapter; and

(2) The displacement of the vessel on even trim at the deepest load waterline.

*Embarkation ladder* means the ladder provided at survival craft embarkation stations to permit safe access to survival craft after launching.

*Embarkation station* means the place where a survival craft is boarded.

*Existing offshore supply vessel* is one contracted for, or the keel of which was laid, before March 15, 1996.

*Flammable liquid* means the same as in § 30.10-22 of this chapter.

*Float-free launching* means that method of launching a survival craft or lifesaving appliance whereby the craft or appliance is automatically released from a sinking vessel and is ready for use.

*Gas-free* means free from dangerous concentrations of flammable or toxic gases.

*Hazardous material* means the same as in § 153.2 of this chapter.

*Immersion suit* means a protective suit that reduces loss of body heat of a person wearing it in cold water.

*Inflatable appliance* means an appliance that depends upon nonrigid, gas-filled chambers for buoyancy and that is normally kept uninflated until ready for use.

*Inflated appliance* means an appliance that depends upon nonrigid, gas-filled chambers for buoyancy and that is kept inflated and ready for use at all times.

*International voyage* means a voyage between a country to which the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS 74/83) applies and a port outside that country.

*Jacking system* means any type of mechanical (including hydraulic) or electrical system used for elevating a liftboat.

*Launching appliance or launching arrangement* means the method or devices for transferring a survival craft or rescue boat from its stowed position to the water. For a launching arrangement using a davit, the term includes the davit, winch, and falls.

*Length*, relative to a vessel, means the length listed on the vessel's certificate of documentation or the "registered length" as defined by § 69.53 of this chapter.

*Lifejacket* means a flotation device approved as a life preserver or lifejacket.

*Liftboat* means an OSV with movable legs capable of raising its hull above the surface of the sea.

*Major conversion* means a conversion of a vessel that, as determined by the Commandant—

(1) Substantially changes the dimensions or carrying capacity of the vessel;

(2) Changes the type of vessel;

(3) Substantially prolongs the life of the vessel; or

(4) Otherwise so changes the vessel that it is essentially a new vessel.

*Marine evacuation system* means an appliance designed to rapidly transfer large numbers of persons from an embarkation station by means of a passage to a floating platform for subsequent embarkation into associated survival craft, or directly into associated survival craft.

*Marine inspector* means any person authorized by the Officer in Charge, Marine Inspection (OCMI), to perform duties concerning the inspection, enforcement, and administration of laws for the safety and navigation of vessels.

*Muster station* means the place where the crew and offshore workers assemble before boarding a survival craft.

*New offshore supply vessel* is one—

(1) Contracted for, or the keel of which was laid, on or after March 15, 1996; or

(2) Which underwent a major conversion that was initiated on or after March 15, 1996.

*Novel lifesaving appliance or arrangement* means one that has new features not fully covered by the provisions of this part but that provides an equal or higher standard of safety.

*Noxious liquid substance* or *NLS* means the same as in § 153.2 of this chapter.

*Ocean* refers to a route more than 20 nautical miles offshore on any of the following waters:

(1) Any ocean.

(2) The Gulf of Mexico.

(3) The Caribbean Sea.

(4) The Gulf of Alaska.

(5) The Bering Sea.

(6) Such other, similar waters as may be designated by the District Commander.

*OCMI* means the same as Officer in Charge, Marine Inspection.

*Officer in Charge, Marine Inspection* means any person of the Coast Guard so designated by the Commandant, to be in charge of an inspection zone for the performance of duties concerning the inspection, enforcement, and administration of laws for the safety and navigation of vessels.

*Offshore supply vessel* means a vessel that—

(1) Is propelled by machinery other than steam;

(2) Does not meet the definition of a passenger-carrying vessel in 46 U.S.C. 2101(22) or 46 U.S.C. 2101(35);

(3) Is more than 15 but less than 500 gross tons (as measured under the Standard, Dual, or Simplified Measurement System under part 69, subpart C, D, or E, of this chapter) or is less than 6,000 gross tons (as measured under the Convention Measurement System under part 69, subpart B, of this chapter); and

(4) Regularly carries goods, supplies, individuals in addition to the crew, or equipment in support of exploration, exploitation, or production of offshore mineral or energy resources.

*Offshore worker* means an individual carried aboard an OSV and employed in a phase of exploration, exploitation, or

production of offshore mineral or energy resources served by the vessel; but it does not include the master or a member of the crew engaged in the business of the vessel, who has contributed no consideration for carriage aboard and is paid for services aboard.

*OSV* means the same as *offshore supply vessel*.

*Quarters* means any space where sleeping accommodations are provided.

*Rescue boat* means a boat designed to rescue persons in distress and to marshal survival craft.

*Restricted service* means service in areas within 12 hours of a harbor of safe refuge or in areas where a liftboat may be jacked up to meet the 100-knot-wind severe-storm criteria of § 174.255(c) of this chapter.

*Seagoing condition* means the operating condition of the OSV with the personnel, equipment, fluids, and ballast necessary for safe operation on the waters where the OSV operates.

*Survival craft* means a craft capable of sustaining the lives of persons in distress from the time of abandoning the OSV on which the persons were originally carried. The term includes lifeboats, liferafts, buoyant apparatus, and lifefloats, but does not include rescue boats.

#### § 125.170 Equivalents.

A substitution for fittings, materials, equipment, arrangements, calculations, information, or tests required by this subchapter may be accepted by the cognizant OCMI; by the Commanding Officer, Marine Safety Center; by the District Commander; or by the Commandant, if the substitution provides an equivalent level of safety.

#### § 125.180 Incorporation by reference.

(a) Certain materials are incorporated by reference into this subchapter with the approval of the Director of the Federal Register in compliance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than the one listed in paragraph (b) of 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 materials are on file for inspection at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC, and at the U.S. Coast Guard, Office of Operating and Environmental Standards, 2100 Second Street SW., Washington, DC 20593-0001, and are available from the sources indicated in paragraph (b) of this section.

(b) The materials approved for incorporation by reference in this



subchapter, and the sections affected, are as follows:

American Bureau of Shipping (ABS):		
Two World-Trade Center, 106th Floor, New York, NY 10048		
Rules for Building and Classing Steel Vessels Under 61 Meters (200 Ft) in Length (1983) .....	127.210	
Rules for Building and Classing Steel Vessels (1995) .....	127.210; 129.360	
Rules for Building and Classing Aluminum Vessels (1975) .....	127.210	
Rules for Building and Classing Mobile Offshore Drilling Units (1994) .....	133.140; 133.150	
American National Standards Institute (ANSI):		
11 West 42nd St., New York, NY 10036		
B 31.1-1986, Code for Pressure Piping, Power Piping .....	128.240	
Z 26.1-1977 (including 1980 Supplement), Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways .....	127.430	
American Society of Mechanical Engineers (ASME):		
345 East 47th St., New York, NY 10027		
Boiler and Pressure Vessel Code Section I, Power Boilers, July 1989 with 1989 addenda .....	128.240	
American Society for Testing and Materials (ASTM):		
1916 Race St., Philadelphia, PA 19103		
D93-80, Standard Test Methods for Flash Point by Pensky-Martens Closed Tester .....	128.310	
American Yacht and Boat Council, Inc. (AYBC):		
3069 Solomon's Island Rd., Edgewater, MD 21037-1416		
A-3-1993, Galley Stoves .....	129.550	
A-7-1970, Recommended Practices and Standards Covering Boat Heating Systems .....	129.550	
E-1-1972, Bonding of Direct-Current Systems .....	129.120	
E-8-1994, Alternating-Current (AC) Electrical Systems on Boats .....	129.120	
E-9-1990, Direct-Current (DC) Electrical Systems on Boats .....	129.120	
Institute of Electrical and Electronics Engineers (IEEE):		
345 E. 47th St., New York, NY 10017		
No. 45-1977, Recommended Practice for Electric Installations on Shipboard .....	129.340	
International Maritime Organization (IMO):		
Publications Section, 4 Albert Embankment, London SE1 7SR, England		
Resolution A.520(13), Code of Practice for the Evaluation, Testing and Acceptance of Prototype Novel Life-saving Appliances and Arrangements, dated 17 November 1983 .....	133.40	
Resolution A.658(16), "Use and Fitting of Retro-Reflective Materials on Life-saving Appliances", dated 20 November 1989 .....	131.855; 131.875; 133.70	
Resolution A.760(18), "Symbols Related to Life-Saving Appliances and Arrangements", dated 17 November 1993 .....	131.875; 133.70; 133.90	
International Convention for the Safety of Life at Sea (SOLAS), Consolidated Edition, 1992 .....	126.170	
National Fire Protection Association (NFPA):		
1 Batterymarch Park, Quincy, MA 02269-9101		
NFPA 70, National Electrical Code, 1993 Edition .....	129.320; 129.340; 129.370	
NFPA 306, Control of Gas Hazards on Vessels, 1993 Edition .....	126.160	
NFPA 1963, Fire Hose Connections, 1993 Edition .....	132.130	
NFPA 10, Standard for Portable Fire Extinguishers, 1994 Edition .....	132.350	
NFPA 302—Fire Protection Standard for Pleasure and Commercial Motor Craft, 1994 Edition .....	129.550	
Underwriters Laboratories, Inc. (UL):		
333 Pfingsten Rd., Northbrook, IL 60062		
UL 19-1992, Lined Fire Hose and Hose Assemblies .....	132.130	
UL 486A-1992, Wire Connectors and Soldering Lugs for Use with Copper Conductors .....	129.340	
UL 489-1995, Molded-Case Circuit Breakers and Circuit-Breaker Enclosures .....	129.380	
UL 57-1976, Electric Lighting Fixtures .....	129.410	
UL 595-1991, Marine-Type Electric Lighting Fixtures .....	129.410	
UL 1570-1995, Fluorescent Lighting Fixtures .....	129.410	
UL 1571-1995, Incandescent Lighting Fixtures .....	129.410	
UL 1572-1995, High Intensity Discharge Lighting Fixtures .....	129.410	
UL 1573-1995, Stage and Studio Lighting Units .....	129.410	
UL 1574-1995, Track Lighting Systems .....	129.410	

**§ 125.190 Right of appeal.**

Any person directly affected by a decision or action taken under this part, by or on behalf of the Coast Guard, may appeal from the decision or action in compliance with subpart 1.03 of this chapter.

**PART 126—INSPECTION AND CERTIFICATION**

**Subpart A—General**

- Sec.
- 126.100 Inspector not limited.
- 126.110 Inspection after accident.
- 126.120 Permit to proceed to another port for repairs.
- 126.130 Cranes.
- 126.140 Drydocking.
- 126.150 Repairs and alterations.
- 126.160 Tests and inspections during repairs or alterations, or during riveting, welding, burning, or other hot work.

- 126.170 Carriage of offshore workers.
- 126.180 Carriage of passengers.

**Subpart B—Certificate of Inspection**

- 126.210 When required.
- 126.220 Description.
- 126.230 How to obtain or renew.
- 126.240 Posting.
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- 126.270 Amendment.

**Subpart C—Initial Inspection**

- 126.310 Prerequisite to Certificate of Inspection.  
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 126.420 When made.  
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 126.470 Marine-engineering systems.

**Subpart E—Reinspection**

- 126.510 When made.  
 126.520 Scope.  
 126.530 Alternative midperiod examination.

**Authority:** 46 U.S.C. 3306; 33 U.S.C. 1321(j); E.O. 12777, 3 CFR, 1991 Comp., p. 351; 49 CFR 1.46.

**Subpart A—General****§ 126.100 Inspector not limited.**

Nothing in this part shall be construed as limiting the inspector from making such tests or inspections as he deems necessary to be assured of the safety and seaworthiness of the vessel.

**§ 126.110 Inspection after accident.**

(a) The owner or operator of an OSV shall make the vessel available for inspection by a marine inspector—

- (1) Each time an accident occurs, or a defect is discovered that affects—  
 (i) The safety of the vessel; or  
 (ii) The effectiveness or completeness of its lifesaving, fire-fighting, or other equipment; or  
 (2) Whenever any important repairs or renewals are made.

(b) The inspection is to ensure that—

- (1) The necessary repairs or renewals have been effectively made;  
 (2) The material and workmanship used to accomplish the repairs or renewals are satisfactory; and  
 (3) The OSV complies with the regulations in this subchapter.

**§ 126.120 Permit to proceed to another port for repairs.**

(a) The cognizant OCMI may issue a permit to proceed to another port for repair if in the judgment of this OCMI the vessel can complete the trip safely even though the Certificate of Inspection has expired or is about to expire.

(b) A "Permit to Proceed to another Port for Repairs", Form CG-948, will be issued by the cognizant OCMI to the owner, operator, or master of the OSV and states the conditions under which the vessel may proceed to another port. The Permit will be issued only upon the

written application of the owner, operator, or master, and only after the surrender of the vessel's Certificate of Inspection to the cognizant OCMI.

(c) The Permit will state on its face the conditions under which it is issued and whether the OSV may carry cargo, goods, supplies, equipment, or offshore workers.

(d) The Permit must be readily available aboard the OSV.

**§ 126.130 Cranes.**

(a) Except as provided by paragraph (b) of this section, cranes, if installed, must comply with §§ 107.258 through 107.260, 108.601, 109.437, 109.439, 109.521, 109.525, and 109.527 of this chapter.

(b) The manufacturer of a crane may have tests and inspections conducted in compliance with § 107.259 of this chapter, if the surveyor conducting them for the American Bureau of Shipping or the International Cargo Gear Bureau certifies their conduct as required by § 107.259(c) of this chapter.

**§ 126.140 Drydocking.**

(a) Unless one or more extensions are authorized by the Commandant (G-MOC), each OSV must be placed in drydock or hauled out for examination twice each 5 years with no interval between examinations exceeding 3 years.

(b) The owner or operator shall notify the cognizant OCMI whenever the OSV is drydocked for any reason. This OCMI, upon notification, will determine whether to assign a marine inspector to examine the underwater hull of the vessel.

(c) The internal structural members of an OSV must be examined at the same intervals required for drydocking by paragraph (a) of this section.

(d) At each drydocking required by paragraph (a) of this section, for an OSV of 100 or more gross tons, a tailshaft survey must be conducted as required by § 61.20-15 of this chapter.

(e) At each drydocking required by paragraph (a) of this section, for an OSV of less than 100 gross tons, the propeller or tailshaft must be drawn for examination if the cognizant OCMI deems drawing it necessary.

**§ 126.150 Repairs and alterations.**

(a) Except in an emergency, no repairs or alterations to the hull or machinery, or to equipment that affects the safety of the OSV, may be made without notice to the cognizant OCMI in the inspection zone where the repairs or alterations are to be made. When the repairs or alterations have been made, notice must be given to this OCMI as soon as practicable.

(b) When emergency repairs or alterations have been made as permitted under paragraph (a) of this section, the master, owner, or operator must notify this OCMI as soon as practicable after the emergency.

(c) Except as provided by paragraphs (b) and (e) of this section, drawings of repairs or alterations must be approved, before work starts, by the cognizant OCMI or, when necessary, by the Commanding Officer, Marine Safety Center (CO, MSC). Drawings will not be needed if deemed unnecessary by this OCMI or by the CO, MSC.

(d) When the cognizant OCMI deems inspection necessary, the repairs or alterations must be inspected by a marine inspector.

(e) Submission of drawings is not required for repairs in kind, but the applicable drawings approved under subpart A of part 127 of this subchapter must be made available to the marine inspector upon request.

**§ 126.160 Tests and inspections during repairs or alterations, or during riveting, welding, burning, or other hot work.**

(a) NFPA 306 must be used as a guide in conducting the examinations and issuances of certificates required by this section.

(b) Until an examination has determined that work can proceed safely, no riveting, welding, burning, or other hot work may commence.

(c) Each examination must be conducted as follows:

(1) At any port or site inside the United States or its territories and possessions, a marine chemist certified by the NFPA must make the examination. If the services of such a chemist are not reasonably available, the cognizant OCMI, upon the recommendation of the contractor and the owner or operator of the OSV, may authorize another person to make the examination. If this indicates that a repair or alteration, or hot work, can be undertaken safely, the person performing the examination shall issue a certificate, setting forth the spaces covered and any necessary conditions to be met, before the work starts. These conditions must include any requirements necessary to maintain safe conditions in the spaces covered and must include any necessary further examinations and certificates. In particular the conditions must include precautions necessary to eliminate or minimize hazards caused by protective coatings or by cargo residues.

(2) At any port or site outside the United States or its territories and possessions, where the services of a certified marine chemist or other person

authorized by the cognizant OCMI are not reasonably available, the master, owner, or operator of the vessel shall make the examination and a proper entry in the OSV's logbook.

(d) The master shall obtain a copy of each certificate issued by the person making the examination described in paragraph (c)(1) of this section. The master, through and for the persons under his control, shall maintain safe conditions aboard the OSV by full observance of each condition to be met, listed in the certificate issued under paragraph (c)(1) of this section.

**§ 126.170 Carriage of offshore workers.**

(a) Offshore workers may be carried aboard an OSV in compliance with this subchapter. The maximum number of offshore workers authorized for carriage will be endorsed on the vessel's Certificate of Inspection; but in no case will the number of offshore workers authorized for carriage exceed 36.

(b) No more than 12 offshore workers may be carried aboard an OSV certificated under this subchapter when on an international voyage, unless the vessel holds a valid passenger-ship-safety certificate (Form CG-968) issued in compliance with the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS 74/83).

**§ 126.180 Carriage of passengers.**

No passengers as defined by 46 U.S.C. 2101(21)(B) may be carried aboard an OSV except in an emergency.

**Subpart B—Certificate of Inspection**

**§ 126.210 When required.**

Except as provided by §§ 126.120 and 126.260, no OSV may be operated without a valid Certificate of Inspection.

**§ 126.220 Description.**

The Certificate of Inspection issued to an OSV specifies the vessel, the route it may travel, the minimum manning it requires, the minimum fire-extinguishing and lifesaving equipment it must carry, the maximum number of offshore workers and of total persons it may carry, the name of its owner and operator, and such other conditions as the cognizant OCMI may determine.

**§ 126.230 How to obtain or renew.**

(a) A builder, owner, master, or operator may begin to obtain or to renew a Certificate of Inspection by submitting an "Application for Inspection of U.S. Vessel," Form CG-3752, to the OCMI of the marine inspection zone in which the inspection is to be made. Form CG-3752 is available from any Marine Safety or Marine Inspection Office of the U.S. Coast Guard.

(b) The application for initial inspection of an OSV being newly constructed or undergoing a major conversion must be submitted before the start of construction or conversion.

(c) The construction, arrangement, and equipment of each OSV must be acceptable to the cognizant OCMI for the issuance of the initial Certificate of Inspection. Acceptance depends on the information, specifications, drawings, and calculations available to this OCMI, and on the successful completion of the initial inspection for certification.

(d) A Certificate of Inspection is renewed by the issuance of a new Certificate of Inspection.

(e) The condition of the OSV and its equipment must be acceptable to the cognizant OCMI for the renewal of the Certificate of Inspection. Acceptance depends on the condition of the vessel as found at the periodic inspection for certification.

**§ 126.240 Posting.**

The Certificate of Inspection must be framed under glass or other suitable transparent material and posted in a conspicuous place aboard the OSV so that each page is visible.

**§ 126.250 Period of validity.**

(a) A Certificate of Inspection is valid for 2 years.

(b) A Certificate of Inspection may be suspended and withdrawn or revoked by the cognizant OCMI at any time for noncompliance with the requirements of this subchapter or other applicable laws.

**§ 126.260 Temporary Certificate.**

If necessary to prevent delay of the OSV, a "Temporary Certificate of Inspection," Form CG-854, containing information listed by § 126.220 may be issued pending the issuance and delivery of the regular Certificate of Inspection. A Temporary Certificate must be carried in the same manner as the regular Certificate.

**§ 126.270 Amendment.**

(a) An amended Certificate of Inspection may be issued at any time by any OCMI. The amended Certificate of Inspection replaces the original, but the expiration date remains the same as that of the original. An amended Certificate of Inspection may be issued to authorize and record a change in the dimensions, gross tonnage, owner, operator, manning, offshore workers permitted, route permitted, conditions of operations, equipment, or the like from that specified in the current Certificate of Inspection.

(b) A request for an amended Certificate of Inspection must be made

to the cognizant OCMI by the owner or operator of the vessel at any time there is a change in the character of a vessel or in its route, equipment, ownership, operation, or similar factors specified in its current Certificate of Inspection.

(c) The cognizant OCMI may require an inspection before issuing an amended Certificate of Inspection.

**Subpart C—Initial Inspection**

**§ 126.310 Prerequisite to Certificate of Inspection.**

The initial inspection is a prerequisite to the issuance of the original Certificate of Inspection.

**§ 126.320 When made.**

(a) No initial inspection occurs until after receipt of the written application of the owner or builder of the vessel to the OCMI in whose zone the vessel is located. The application must be on Form CG-3752, "Application for Inspection of U.S. Vessel."

(b) The initial inspection occurs at a time and place agreed to by the party requesting the inspection and by the cognizant OCMI. The owner or the builder, or a representative of either, must be present during the inspection.

**§ 126.330 Plans.**

Before construction starts, the owner, operator, or builder shall develop plans indicating the proposed arrangement and construction of the vessel. (The list of plans to be developed and the required disposition of these plans appears in part 127 of this subchapter.)

**§ 126.340 Scope.**

The initial inspection normally consists of a series of inspections conducted during the construction of the vessel. This inspection determines whether the vessel was built to comply with developed plans and in compliance with applicable law. Items normally included in this inspection are all the items listed in § 126.430 and in addition the marine inspector verifies that the arrangement of the vessel conforms to the approved plans, that acceptable material is used in the construction of the vessel, and that the workmanship meets required standards for marine construction. The owner or builder shall make the vessel available for inspection at each stage of construction specified by the cognizant OCMI.

**§ 126.350 Specific tests and inspections.**

(a) The applicable tests and inspections set forth in subpart D of this part must be made during the initial inspection.

(b) The following specific tests and inspections must also be conducted in the presence of the marine inspector:

(1) Installation of piping for gaseous fixed fire-extinguishing (see § 95.15–15 of this chapter).

(2) Hydraulic steering-systems. If fitted with manual operation, these systems must be tested in the manual mode, with the hydraulic pumps secured, for smooth, efficient operation by one person.

#### Subpart D—Inspection for Certification

##### § 126.410 Prerequisite to reissuance of Certificate of Inspection.

An inspection for certification is a prerequisite to the reissuance of a Certificate of Inspection.

##### § 126.420 When made.

No inspection for certification occurs until after receipt of the written application of the owner, builder, master, or operator of the vessel by the OCMI in whose zone the vessel is located. The application must be on the "Application for Inspection of U.S. Vessel", Form CG–3752.

##### § 126.430 Scope.

The inspection for certification is made by a marine inspector to determine whether the vessel is in a safe and seaworthy condition. The owner or builder shall make the vessel and its equipment available for inspection, including the following items:

- (a) Structure.
- (b) Watertight integrity.
- (c) Pressure vessels and their appurtenances.
- (d) Piping.
- (e) Main and auxiliary machinery.
- (f) Steering apparatus.
- (g) Electrical installations.
- (h) Lifesaving equipment.
- (i) Work vests.
- (j) Fire-detecting and fire-extinguishing equipment.
- (k) Pollution-prevention equipment.
- (l) Sanitary condition.
- (m) Fire hazards.
- (n) Verification of validity of certificates required and issued by the Federal Communications Commission.
- (o) Lights and signals as required by the applicable navigational rules.
- (p) Tests and inspections of cranes in compliance with § 126.130.

##### § 126.440 Lifesaving equipment.

At each inspection for certification, the tests and inspections specified by § 91.25–15 of this chapter must occur in the presence of a marine inspector, or as otherwise directed by the cognizant OCMI.

##### § 126.450 Fire-extinguishing equipment.

At each inspection for certification, the marine inspector determines whether the tests and inspections required by § 132.350 of this subchapter have been performed.

##### § 126.460 Tanks for dry bulk cargo.

The owner shall ensure that tanks for dry bulk cargo that are pressure vessels are inspected for compliance with § 61.10–5(b) of this chapter.

##### § 126.470 Marine-engineering systems.

The inspection procedures for marine-engineering systems contained in subchapter F of this chapter apply.

#### Subpart E—Reinspection

##### § 126.510 When made.

(a) Except as provided by § 126.530 of this subpart, at least one reinspection must be made of each vessel holding a Certificate of Inspection. The owner, master, or operator shall arrange for the reinspection between the tenth and fourteenth months of the period for which the Certificate of Inspection is valid.

(b) The owner, master, or operator shall make the vessel available for the reinspection at a time and place acceptable to the cognizant OCMI, but no written application is necessary.

##### § 126.520 Scope.

In general, the reinspection goes into less detail than that described by § 126.430 of this part for the inspection for certification, unless the cognizant OCMI or marine inspector determines that a major change has occurred since the last inspection.

##### § 126.530 Alternative midperiod examination.

(a) The owner, master, or operator of an OSV of less than 400 gross tons may ask the cognizant OCMI to arrange an alternative midperiod examination. The request must go to the cognizant OCMI assigned responsibility for inspections in the country in which the vessel is operating and will be examined. To qualify for the alternative midperiod examination, the vessel must meet the following requirements:

(1) The request must be in writing and be received by this OCMI before the end of the twelfth month of the period for which the Certificate of Inspection is valid.

(2) The vessel is likely to be continuously employed outside of the United States during the tenth through the fourteenth month of validity of its Certificate of Inspection.

(b) In determining whether to authorize the alternative midperiod

examination, this OCMI considers the following:

(1) Information contained in previous examination reports on inspection and drydock, including the recommendation, if any, of the then cognizant OCMI for participation in the alternative midperiod examination.

(2) The nature, number, and severity of marine casualties or accidents, as defined by § 4.03–1 of this chapter, involving the vessel in the 3 years preceding the request.

(3) The nature, number, and gravity of any outstanding inspection requirements for the vessel.

(4) The owner's or operator's history of compliance and cooperation in such alternative midperiod examinations, including:

(i) The prompt correction of deficiencies.

(ii) The reliability of previously submitted reports on such alternative midperiod examinations.

(iii) The reliability of representations that the vessel would be, and was, employed outside of the United States for the tenth through the fourteenth month of validity of its Certificate of Inspection.

(c) This OCMI provides the applicant with written authorization, if any, to proceed with the alternative midperiod examination, including, when appropriate, special instructions.

(d) The following conditions must be met for the alternative midperiod examination to be accepted instead of the reinspection required by § 126.510 of this subpart:

(1) The alternative midperiod examination must occur between the tenth and fourteenth months of validity of the Certificate of Inspection.

(2) The reinspection must be of the scope detailed by § 126.520 of this subpart and must be made by the master, owner, or operator of the vessel, or by a designated representative of the owner or operator.

(3) Upon completion of the alternative midperiod examination, the person or persons making the examination shall prepare a comprehensive report describing the conditions found. This report must contain sufficient detail to let this OCMI determine whether the vessel is fit for the service and route specified on the Certificate of Inspection. This report must include subsidiary reports and receipts documenting the servicing of lifesaving and fire-protection equipment, and any photographs or sketches necessary to clarify unusual circumstances. Each person preparing this report shall sign it and certify that the information in it is complete and accurate.

(4) Unless the master of the vessel participated in the alternative midperiod examination and the preparation of the comprehensive report, the master shall review the report for completeness and accuracy. The master shall sign the report to indicate review and shall forward it to the owner or operator of the vessel, who asked for the examination.

(5) The owner or operator of a vessel examined under this section shall review and submit the comprehensive report, required by paragraph (d)(3) of this section, to this OCMI. The report must reach this OCMI before the first day of the sixteenth month of validity of the Certificate of Inspection. The forwarding letter or endorsement must be certified and must contain the following information:

(i) That the person or persons who made the alternative midperiod examination acted on behalf of the vessel's owner or operator.

(ii) That the report was reviewed by the owner or operator.

(iii) That the discrepancies noted during the reinspection have been corrected, or will be within a stated time.

(iv) That the owner or operator has sufficient personal knowledge of conditions aboard the vessel at the time of the reinspection, or has conducted inquiries necessary, to justify forming a belief that the report is complete and accurate.

(e) The form of certification required under this section, for the alternative midperiod examination, is as follows:

I certify that to the best of my knowledge and belief the above is complete and accurate.

(f) Deficiencies and hazards discovered during the alternative midperiod examination made pursuant to this section must be corrected if practicable, before the submittal of the report to this OCMI in compliance with paragraph (d)(5) of this section. Deficiencies and hazards not corrected by the time the report is submitted must be noted in the report as "outstanding." Upon receipt of a report indicating any outstanding deficiency or hazard, this OCMI will inform the owner or operator of the OSV in writing of the time allowed to correct each deficiency and hazard and of the method for establishing that each has been corrected. When any deficiency or hazard remains uncorrected or uneliminated after this time allowed, this OCMI will initiate appropriate enforcement.

(g) Upon receipt of the report, this OCMI will evaluate it and determine:

(1) Whether the cognizant OCMI accepts the alternative midperiod examination instead of the reinspection required by § 126.510 of this subpart.

(2) Whether the vessel is in satisfactory condition.

(3) Whether the vessel continues to be reasonably fit for its intended service and route.

(h) This OCMI may require further information necessary for the determinations required by this section. He or she will inform the owner or operator of the vessel in writing of these determinations.

(i) If this OCMI, in compliance with paragraph (g) of this section, does not accept the alternative midperiod examination instead of the reinspection required by § 126.510 of this subpart, he or she will require reinspection of the vessel as soon as practicable. He or she will inform the owner or operator of the vessel in writing that the examination is not acceptable and that a reinspection is necessary. The owner, master, or operator shall make the vessel available for the reinspection at a time and place agreeable to this OCMI.

## PART 127—CONSTRUCTION AND ARRANGEMENTS

### Subpart A—Plan Approval

Sec.

127.100 General.

127.110 Plans and specifications required for new construction.

127.120 Procedure for submittal of plans.

### Subpart B—Particular Construction and Arrangements

127.210 Structural standards.

127.220 General fire protection.

127.230 Subdivision and stability.

127.240 Means of escape.

127.250 Ventilation for enclosed spaces.

127.260 Ventilation for accommodations.

127.270 Location of accommodations and pilothouse.

127.280 Construction and arrangement of quarters for crew members and accommodations for offshore workers.

### Subpart C—Rails and Guards

127.310 Where rails required.

127.320 Storm rails.

127.330 Guards in dangerous places.

### Subpart D—Construction of Windows, Visibility, and Operability of Coverings

127.410 Safety-glazing materials.

127.420 Strength.

127.430 Visibility from pilothouse.

127.440 Operability of window coverings.

Authority: 46 U.S.C. 3306; 49 CFR 1.46.

### Subpart A—Plan Approval

#### § 127.100 General.

Plans listed by § 127.110 of this subpart must be submitted for approval after the owner or builder applies for

inspection in compliance with § 126.320 of this subchapter.

#### § 127.110 Plans and specifications required for new construction.

Each applicant for approval of plans and for an original Certificate of Inspection shall submit three copies of the following:

(a) *General.*

(1) Specifications (information only).

(2) General Arrangement Plans.

(3) Safety Plan (Fire-Control Plan), for OCMI review and approval.

(b) *Hull structure.*

(1) Midship Section.

(2) Booklet of Scantling Plans.

(c) *Subdivision and stability.* [For plans required for subdivision and stability, see subchapter S of this chapter.]

(d) *Marine engineering.*

(1) Piping diagrams of each Class I systems.

(2) Piping diagrams of the following Class II systems (the builder's certification of Class II non-vital piping systems must accompany the piping diagrams in compliance with § 128.220(c) of this subchapter):

(i) Systems for fill, transfer, and service of fuel oil.

(ii) Fire-main and fixed gaseous fire-extinguishing systems.

(iii) Bilge systems.

(iv) Ballast systems.

(v) Fluid-driven power and control systems.

(vi) Through-hull penetrations and shell connections.

(vii) Sanitary systems.

(viii) Vents, sounding tubes, and overflows.

(ix) Compressed-air systems.

(3) Steering and steering-control systems.

(4) Propulsion and propulsion-control systems.

(5) Piping diagrams of each system containing any flammable, combustible, or hazardous liquid including—

(i) Cargo-oil systems;

(ii) Systems for combustible drilling-fluid (such as oil-based liquid mud); and

(iii) Cargo-transfer systems for fixed independent or portable tanks.

(e) *Electrical engineering.*

(1) For each vessel of less than 100 gross tons, the following plans must be submitted:

(i) Arrangement of electrical equipment (plan and profile) with equipment identified as necessary to show compliance with this subchapter.

(ii) Electrical one-line diagram that includes wire types and sizes, overcurrent-device rating and setting, and type of electrical-equipment

enclosure (drip-proof, watertight, or the like).

(iii) Switchboard plans required by paragraphs (e) and (f) of § 110.25-1 of this chapter.

(2) For each vessel of 100 or more gross tons, the plans required by § 110.25 of this chapter must be submitted.

(f) *Automation.* For each vessel of 100 or more gross tons, where automated systems are provided to replace specific personnel in the control and observation of the propulsion systems and machinery spaces, or to reduce the level of crew associated with the engine department, the following plans must be submitted:

(1) Plans necessary to demonstrate compliance with subpart D of part 130 of this subchapter.

(2) Automation-test procedure.

(3) Operations manual.

#### § 127.120 Procedure for submittal of plans.

If a vessel is to be constructed, altered, or repaired, the plans, information, and calculations required by this part must be submitted to—

(a) The OCMI in the zone where the vessel is to be constructed, altered, or repaired; or

(b) The Commanding Officer, Marine Safety Center, 400 Seventh Street SW., Washington, DC 20590-0001.

#### Subpart B—Particular Construction and Arrangements

##### § 127.210 Structural standards.

(a) Except as provided by paragraphs (b) and (c) of this section, compliance with the construction and structural rules established by the American Bureau of Shipping and incorporated by reference in § 125.180 is acceptable for the design and construction of an OSV.

(b) The current standards of other recognized classification societies, or any other established current standard, may also be used upon approval by the Commandant (G-MSE).

(c) If no established current standard for design is used, detailed design calculations must be submitted with the plans required by § 127.110 of this part.

(d) The plans required by § 127.110 of this part should specify their standard for design.

##### § 127.220 General fire protection.

(a) Each vessel must be designed and constructed to minimize fire hazards, as far as reasonable and practicable.

(b) Exhausts of internal-combustion engines, galley uptakes, and similar sources of ignition must be kept clear of and insulated from woodwork and other combustible matter.

(c) Paint lockers and similar compartments must be constructed of steel or be wholly lined with steel.

(d) Except as provided by paragraph (e) of this section, when a compartment containing the emergency source of electric power, or vital components of that source, adjoins a space containing either the ship's service generators or machinery necessary for the operation of the ship's service generators, each common bulkhead and deck must be of "A-60" Class construction as defined by § 72.05-10 of this chapter.

(e) The "A-60" Class construction required by paragraph (d) of this section is unnecessary if the emergency source of electric power is in a ventilated battery locker that—

(1) Is located above the main deck;

(2) Is located in the open; and

(3) Has no boundaries contiguous with other decks or bulkheads.

##### § 127.230 Subdivision and stability.

Each vessel must meet the applicable requirements in subchapter S of this chapter.

##### § 127.240 Means of escape.

(a) Except as provided by paragraphs (l) and (m) of this section, there must be at least two means of escape, exclusive of windows and portholes, from each of the following spaces:

(1) Each space accessible to offshore workers.

(2) Crew accommodations and each space where the crew may normally be employed.

(b) At least one of the two means of escape must—

(1) Be independent of watertight doors in bulkheads required by part 174 of this chapter to be watertight; and

(2) Lead as directly to the open deck as practicable.

(c) The two means of escape required by paragraph (a) of this section must be widely separated and, if possible, at opposite ends or sides of the space, to minimize the possibility that one incident will block both escapes.

(d) Except as provided by paragraph (e) of this section, a vertical ladder ending at a deck scuttle may not be either of the means of escape required by paragraph (a) of this section.

(e) A vertical ladder ending at a deck scuttle may be the second means of escape if the—

(1) Primary means of escape is a stairway or passageway;

(2) Installation of another stairway or passageway is impracticable;

(3) Scuttle is located where stowed deck cargo could not interfere;

(4) Scuttle is fitted with a quick-acting release, and with a hold-back device to hold it open; and

(5) Scuttle meets the requirements for location, strength, and height of coaming in subchapter E of this chapter.

(f) Each vertical ladder must—

(1) Have rungs that are—

(i) At least 410 millimeters (16 inches) long;

(ii) At most 300 millimeters (12 inches) apart, uniform for the length of the ladder; and

(iii) At least 180 millimeters (7 inches) from the nearest permanent object in back of the ladder;

(2) Have at least 115 millimeters (4½ inches) of clearance above each rung;

(3) Be made of incombustible materials; and

(4) Have an angle of inclination with the horizontal, greater than 70 degrees but not more than 90 degrees.

(g) No means may be provided for locking any interior door giving access to either of the two required means of escape, except that a crash door or locking-device, capable of being easily forced in an emergency, may be employed if a permanent and conspicuous notice to this effect is attached to both sides of the door. A means may be provided for locking an exterior door to a deckhouse if the door is—

(1) Locked only by a key under the control of one of the OSV's officers; and

(2) Always operable from the inside.

(h) Each passageway or stairway must be wide enough to provide an effective means of escape for the number of persons having access to it even if each person is wearing a lifejacket. There must be no protrusions in the means of escape that could cause injury, ensnare clothing, or damage lifejackets.

(i) No interior stairway, other than within the machinery spaces or cargo holds, may be less than 710 millimeters (28 inches) wide. The angle of inclination of each stairway with the horizontal must not exceed 50 degrees.

(j) No dead-end passageway, or equivalent, may be more than 13.1 meters (40 feet) in length.

(k) Vertical access must be provided between the various weather decks by means of vertical or permanently inclined ladders. The angles of inclination of the inclined ladders with the horizontal must not exceed 70 degrees, except that vertical ladders may be used for access to pilot-house tops and other house tops used only for weather protection.

(l) Only one means of escape need be provided from each of the spaces stipulated in paragraph (a) of this section, provided the maximum area of each space is less than 28 square meters (300 square feet) and the maximum dimension (length, breadth, or depth) of

each space is less than 6 meters (20 feet).

(m) Alternative means of escape from spaces may be provided if acceptable to the cognizant OCMI.

**§ 127.250 Ventilation for enclosed spaces.**

(a) Each enclosed space within the vessel must be properly vented or ventilated. Means must be provided for closing each vent and ventilator.

(b) Means must be provided for stopping each fan in a ventilation system serving machinery and cargo spaces and for closing, in case of fire, each doorway, ventilator, and annular space around funnels and other openings into such spaces.

**§ 127.260 Ventilation for accommodations.**

(a) Each accommodation space must be adequately ventilated in a manner suitable for the purpose of the space.

(b) Each vessel of 100 or more gross tons must be provided with a mechanical ventilation system unless the cognizant OCMI is satisfied that a natural system, such as opening windows, portholes, or doors, will accomplish adequate ventilation in ordinary weather.

**§ 127.270 Location of accommodations and pilothouse.**

(a) Neither quarters for crew members or offshore workers nor the pilothouse may be located forward of the collision bulkhead required by § 174.190 of this chapter.

(b) Except as provided in paragraph (c) of this section, no part of any deck with accommodations for crew members or offshore workers may be below the deepest load waterline.

(c) Any deck with accommodations for crew members or offshore workers may be below the deepest load waterline if—

(1) The vessel complies with the damage-stability requirements in § 174.205 of this chapter; and

(2) The deck head of the space is not below the deepest load waterline.

(d) No hawse pipe or chain pipe may pass through accommodations for crew members or offshore workers.

(e) There must be no direct access, except through solid, close-fitted doors or hatches, between accommodations and chain lockers, cargo spaces, or machinery spaces.

(f) No sounding tubes, or vents from fuel-oil or cargo-oil tanks may open into accommodations for crew members or offshore workers, except that sounding tubes may open into passageways.

(g) No access openings from fuel-oil or cargo-oil tanks may open into quarters for crew members or offshore workers.

(h) Quarters for crew members must be separate from and independent of those for offshore workers unless the cognizant OCMI approves an alternative arrangement.

**§ 127.280 Construction and arrangement of quarters for crew members and accommodations for offshore workers.**

(a) The following requirements apply to quarters for crew members on each vessel of 100 or more gross tons:

(1) Quarters for crew members must be divided into staterooms none of which berths more than four members.

(2) Each stateroom for use by crew members must—

(i) Have clear headroom of at least 1.9 meters (6 feet, 3 inches); and

(ii) Contain at least 2.8 square meters (30 square feet) of deck and at least 6 cubic meters (210 cubic feet) of space for each member accommodated. The presence in a stateroom of equipment for use by the occupants does not diminish the area or volume of the room.

(3) There must be at least one toilet, one washbasin, and one shower or bathtub for every eight or fewer crew members who do not occupy a stateroom to which a private or a semiprivate facility is attached.

(b) The following requirements apply to accommodations for offshore workers on each vessel of 100 or more gross tons:

(1) Each offshore worker aboard must be provided with adequate fixed seating. The width of each seat should be at least 460 millimeters (18 inches). The spacing of fixed seating must be sufficient to allow ready escape in case of fire or other emergency. The following are minimal requirements:

(i) Aisles 4.6 meters (15 feet) in length or less must not be less than 610 millimeters (24 inches) wide.

(ii) Aisles more than 4.6 meters (15 feet) in length must not be less than 760 millimeters (30 inches) wide.

(iii) Where the seating is in rows, the distance from seat front to seat front must not be less than 760 millimeters (30 inches).

(2) If the intended operation of a vessel is to carry offshore workers aboard for more than 24 hours, quarters for them must be provided. Each stateroom for use by them must—

(i) Berth no more than six workers;

(ii) Have clear headroom of at least 1.9 meters (6 feet, 3 inches); and

(iii) Contain at least 1.9 square meters (20 square feet) of deck and at least 4 cubic meters (140 cubic feet) of space for each worker accommodated. The presence in a stateroom of equipment for use by the occupants does not diminish the area or volume of the room.

(3) Toilets and washbasins for use by offshore workers must meet the requirements of paragraph (a)(3) of this section.

(c) Each crew member and offshore worker aboard a vessel of less than 100 gross tons must be provided with accommodations of adequate size and construction, and with equipment for his or her protection and convenience suitable to the size, facilities, and service of the vessel.

(d) For each vessel of 100 or more gross tons, the bulkheads and decks separating accommodations for crew members and offshore workers from machinery spaces must be of "A" Class construction as defined by § 92.07-5 of this chapter.

(e) After reviewing the arrangement drawings required by § 127.110 of this part, the cognizant OCMI will determine, and record on the vessel's Certificate of Inspection, the number of offshore workers that the vessel may carry.

**Subpart C—Rails and Guards**

**§ 127.310 Where rails required.**

(a) Each vessel must have permanently installed efficient guard rails or bulwarks on decks and bridges. Each rail or bulwark must stand at least 1 meter (39-1/2 inches) from the deck except that, where this height would interfere with the normal operation of the vessel, the cognizant OCMI may approve a lesser height.

(b) At exposed peripheries of the freeboard and superstructure decks, each rail must consist of at least three courses, including the top. The opening below the lowest course must be no more than 230 millimeters (9 inches) with courses no more than 380 millimeters (15 inches) apart. On other decks and bridges each rail must consist of at least two courses, including the top, approximately evenly spaced.

(c) If satisfied that the installation of any rail of the required height would be impracticable, the cognizant OCMI may accept hand grabs or a rail of a lesser height in its place.

**§ 127.320 Storm rails.**

Suitable storm rails must be installed in each passageway and at the deckhouse sides, including in way of inclined ladders, where persons aboard have normal access. They must be installed on both sides of passageways which are more than 1.8 meters (6 feet) wide.

**§ 127.330 Guards in dangerous places.**

Suitable hand covers, guards, or rails must be installed on each exposed and

dangerous place, such as gears of rotating machinery, and hot surfaces.

#### Subpart D—Construction of Windows, Visibility, and Operability of Coverings

##### § 127.410 Safety-glazing materials.

Glass and other glazing material used in windows must be material that will not break into dangerous fragments if fractured.

##### § 127.420 Strength.

Each window or porthole, and its means of attachment to the hull or the deckhouse, must be capable of withstanding the maximum expected load from wind and waves, due to its location on the vessel's and the authorized route of the vessel.

##### § 127.430 Visibility from pilothouse.

(a) Windows and other openings at the pilothouse must be of sufficient size and properly located to provide adequate view for safe operation in any condition.

(b) Glass or other glazing material used in windows at the pilothouse must have a light transmission of at least 70 percent according to Test 2 of ANSI Z26.1, "Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways," and must comply with Test 15 of ANSI Z26.1 for Class I Optical Deviation.

##### § 127.440 Operability of window coverings.

Any covering or protection placed over a window or porthole that could be used as a means of escape must be able to be readily removed or opened. It must be possible to open or remove the covering or protection without anyone's having to go onto a weather deck. It may be necessary to break the glass of a window or porthole before removing or opening the covering or protection.

### PART 128—MARINE ENGINEERING: EQUIPMENT AND SYSTEMS

#### Subpart A—General

- Sec.  
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128.120 Plan approval.  
128.130 Vital systems.

#### Subpart B—Materials and Pressure Design

- 128.210 Class II vital systems—materials.  
128.220 Class II non-vital systems—materials and pressure design.  
128.230 Penetrations of hulls and watertight bulkheads—materials and pressure design.  
128.240 Hydraulic or pneumatic power and control-materials and pressure design.

#### Subpart C—Main and Auxiliary Machinery

- 128.310 Fuel.  
128.320 Exhaust systems.

#### Subpart D—Design Requirements for Specific Systems

- 128.410 Ship's service refrigeration systems.  
128.420 Keel-cooler installations.  
128.430 Grid-cooler installations.  
128.440 Bilge systems.  
128.450 Liquid-mud systems.

**Authority:** 46 U.S.C. 3306; 49 CFR 1.46.

#### Subpart A—General

##### § 128.110 Equipment and systems.

(a) Except as provided by this part, the design, installation, testing, and inspection of materials, machinery, pressure vessels, and piping must comply with subchapter F of this chapter.

(b) This part contains requirements for equipment and systems commonly found on an OSV. If additional or unique systems, such as for low-temperature cargoes, are to be installed, they too must comply with subchapter F of this chapter.

##### § 128.120 Plan approval.

The plans required by subchapter F of this chapter need not be submitted if the plans required by § 127.110(d) of this subchapter have been.

##### § 128.130 Vital systems.

(a) Vital systems are those systems that are vital to a vessel's survivability and safety. For the purpose of this subchapter, the following are vital systems:

- (1) Systems for fill, transfer, and service of fuel oil.
- (2) Fire-main systems.
- (3) Fixed gaseous fire-extinguishing systems.
- (4) Bilge systems.
- (5) Ballast systems.
- (6) Steering systems and steering-control systems.
- (7) Propulsion systems and their necessary auxiliaries and control systems.
- (8) Systems for transfer and control of cargo, for integral tanks or fixed independent tanks, in compliance with § 125.110 of this subchapter.
- (9) Ship's service and emergency electrical-generation systems and their auxiliaries vital to the vessel's survivability and safety.
- (10) Any other marine-engineering system identified by the cognizant OCMI as crucial to the survival of the vessel or to the protection of the personnel aboard.

(b) For the purpose of this subchapter, a system not identified by paragraph (a) of this section is a non-vital system.

#### Subpart B—Materials and Pressure Design

##### § 128.210 Class II vital systems—materials.

Except as provided by §§ 128.230 and 128.240 of this subpart, instead of complying with part 56 of this chapter, materials used in Class II vital piping-systems may be accepted by the cognizant OCMI or the Commanding Officer, Marine Safety Center, if shown to provide a level of safety equivalent to materials in subpart 56.60 of this chapter.

##### § 128.220 Class II non-vital systems—materials and pressure design.

(a) Except as provided by §§ 128.230, 128.240, and 128.320 of this subpart, a Class II non-vital piping-system need not meet the requirements for materials and pressure design of subchapter F of this chapter.

(b) Piping for salt-water service must be of a corrosion-resistant material and, if ferrous, be hot-dip galvanized or be at least of extra-heavy schedule in wall thickness.

(c) Each Class II non-vital piping-system must be certified by the builder as suitable for its intended service. A written certificate to this effect must be submitted with the plans required by § 127.110(d) of this subchapter.

(d) The cognizant OCMI will review the particular installation of each system for the safety hazards identified in paragraphs (a), (b)(1), and (c) through (k) of § 56.50–1 of this chapter, and will add requirements as appropriate.

##### § 128.230 Penetrations of hulls and watertight bulkheads—materials and pressure design.

(a) Each piping penetration, in each bulkhead required by this subchapter to be watertight, must meet the requirements for materials and pressure design of subchapter F of this chapter.

(b) Each overboard discharge and shell connection, up to and including required shut-off valves, must meet the requirements for materials and pressure design of subchapter F of this chapter.

##### § 128.240 Hydraulic or pneumatic power and control—materials and pressure design.

(a) Each standard piping component (such as pipe runs, fittings, flanges, and standard valves) for hydraulic or pneumatic power and control systems must meet the requirements for materials and pressure design of § 128.110, 128.210, or 128.220 of this part, as appropriate.

(b) Any non-standard hydraulic or pneumatic component (such as control valves, check valves, relief valves, and



regulators) may be accepted by the cognizant OCMI or the Commanding Officer, Marine Safety Center, if the component is certified by the manufacturer as suitable for marine service and if—

(1) The component meets each of the requirements for materials and pressure design of subparts 56.60 and 58.30 of this chapter and if its service is limited to the manufacturer's rated pressure; or

(2) The service of the component is limited to 1/2 the manufacturer's recommended maximum allowable working pressure (MAWP) or 1/10 the component's burst pressure. Burst-pressure testing is described in ANSI B 31.1, Paragraph 104.7.A, and must be conducted to comply with Paragraph A-22, Section I, ASME Boiler and Pressure Vessel Code. Written certification of results of burst-pressure testing must be submitted with the plans required by § 127.110(d) of this subchapter.

### Subpart C—Main and Auxiliary Machinery

#### § 128.310 Fuel.

(a) Except as provided by paragraph (b) of this section, each internal-combustion engine installed on an OSV, whether for main propulsion or for auxiliaries, must be driven by a fuel having a flashpoint of not lower than 43 °C (110 °F) as determined by ASTM D93.

(b) The use of a fuel with a flashpoint of lower than 43 °C (110 °F) must be specifically approved by the Commandant (G-MSE), except in an engine for a gasoline-powered rescue boat.

#### § 128.320 Exhaust systems.

No diesel-engine exhaust system need meet the material requirements in § 58.10-5(d)(1)(i) of this chapter if the installation is certified as required by § 128.220(c) of this part.

### Subpart D—Design Requirements for Specific Systems

#### § 128.410 Ship's service refrigeration systems.

No self-contained unit either for air-conditioning or for refrigerated spaces for ship's stores need comply with § 58.20-5, 58.20-10, 58.20-15, 58.20-20(a), or 58.20-20(b) of this chapter if—

(a) The unit uses a fluorocarbon refrigerant allowed by part 147 of this chapter;

(b) The manufacturer certifies that the unit is suitable for its intended purpose; and

(c) Electrical wiring meets the applicable requirements in subchapter J of this chapter.

#### § 128.420 Keel-cooler installations.

(a) Except as provided by this section, each keel-cooler installation must comply with § 56.50-96 of this chapter.

(b) Approved metallic flexible connections may be located below the deepest-load waterline if the system is a closed loop below the waterline and if its vent is located above the waterline.

(c) Fillet welds may be used in the attachment of channels and half-round pipe sections to the bottom of the vessel.

(d) Short lengths of approved non-metallic flexible hose fixed by metallic or non-metallic hose-clamps may be used at machinery connections if—

(1) The clamps are of a corrosion-resistant material;

(2) The clamps do not depend on spring tension for their holding power; and

(3) Two of the clamps are used on each end of the hose, except that one clamp may be used on an end expanded or beaded to provide a positive stop against hose slippage.

(4) The clamps are resistant to vibration, high temperature, and brittleness.

#### § 128.430 Grid-cooler installations.

(a) Each hull penetration for a grid-cooler installation must be made through a cofferdam or at a seachest and must be provided with isolation valves fitted as close to the sea inlet as possible.

(b) Each grid cooler must be protected against damage from debris and grounding by protective guards or by recessing the cooler into the hull.

#### § 128.440 Bilge systems.

(a) Except as provided by this section, each bilge system must comply with §§ 56.50-50 and 56.50-55 of this chapter.

(b) If the steering room, engine room, centerline passageway, forward machinery space, and compartment containing the dry-mud tanks are the only below-deck spaces that must be fitted with bilge suctions, the vessel may be equipped to the standards of §§ 56.50-50 and 56.50-57 of this chapter applicable to a dry-cargo vessel of less than 55 meters (180 feet) in length.

#### § 128.450 Liquid-mud systems.

(a) Liquid-mud piping systems may use resiliently seated valves of Category A to comply with §§ 56.20-15 and 56.50-60 of this chapter.

(b) Tanks for oil-based liquid mud must be fitted with tank vents equipped with flame screens. Vents must not discharge to the interior of the vessel.

## PART 129—ELECTRICAL INSTALLATIONS

### Subpart A—General Provisions

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Authority: 46 U.S.C. 3306; 49 CFR 1.46.

### Subpart A—General Provisions

#### § 129.100 General.

This part contains requirements for the design, construction, and installation of electrical equipment and systems including power sources, lighting, motors, miscellaneous equipment, and safety systems.

#### § 129.110 Applicability.

Except as specifically provided in this part, electrical installations on OSVs must comply with subchapter J of this chapter.

#### § 129.120 Alternative standards.

(a) An OSV of 19.8 meters (65 feet) in length or less may meet the following

requirements of the American Yacht and Boat Council Projects, where applicable, instead of § 129.340 of this part:

(1) E-1, Bonding of Direct Current Systems.

(2) E-8, AC Electrical Systems on Boats.

(3) E-9, DC Electrical Systems on Boats.

(b) An OSV with an electrical installation operating at a potential of less than 50 volts may comply with 33 CFR 183.430 instead of § 129.340 of this part.

### Subpart B—General Requirements

#### § 129.200 Design, installation, and maintenance.

Electrical equipment on a vessel must be designed, installed, and maintained to—

(a) Provide services necessary for safety under normal and emergency conditions;

(b) Protect crew members, offshore workers, and the vessel from electrical hazards, including fire, caused by or originating in electrical equipment and electrical shock;

(c) Minimize accidental personal contact with energized parts; and

(d) Prevent electrical ignition of flammable vapors.

#### § 129.210 Protection from wet and corrosive environments.

(a) Electrical equipment used in the following spaces must be drip-proof:

(1) A machinery space.

(2) A space normally exposed to splashing, water wash-down, or other wet conditions within a galley, a laundry, or a public washroom or toilet room that has a bath or shower.

(3) Every other space with similar wet conditions.

(b) Electrical equipment exposed to the weather must be watertight.

(c) Electrical equipment exposed to corrosive environments must be of suitable construction and must be resistant to corrosion.

#### § 129.220 Basic safety.

(a) Electrical equipment and installations must be suitable for the roll, pitch, and vibration of the vessel under way.

(b) All equipment, including switches, fuses, and lampholders, must be suitable for the voltage and current used.

(c) Receptacle outlets of the type providing a grounded pole or a specific direct-current polarity must be of a configuration that does not permit improper connection.

(d) Electrical equipment and circuits must be clearly marked and identified.

(e) Any cabinet, panel, box, or other enclosure containing more than one source of power must be fitted with a sign warning persons of this condition and identifying the circuits to be disconnected.

### Subpart C—Power Sources and Distribution Systems

#### § 129.310 Power sources.

(a)(1) Each vessel that relies on electricity to power the following loads must be arranged so that the loads can be energized from at least two sources of electricity:

(i) Any system identified as a vital system in § 128.130(a) of this subchapter.

(ii) Interior lights.

(iii) Communication systems.

(iv) Navigational equipment and lights.

(v) Fire-protection equipment.

(2) A vessel with batteries of enough capacity for 3 hours of continuous operation to supply the loads specified in paragraph (a)(1) of this section, and with a generator or alternator driven by a propulsion engine, complies with paragraph (a)(1) of this section.

(b) Where a generator driven by a propulsion engine is used as a source of electrical power, no speed change, throttle movement, or change in direction of the propeller shaft of the vessel may interrupt power to any of the loads specified in paragraph (a)(1) of this section.

#### § 129.315 Power sources for OSVs of 100 or more gross tons.

(a) The requirements of this section apply instead of those in subpart 111.10 of this chapter.

(b) If a generator provides electrical power for any system identified as a vital system by § 128.130(a) of this subchapter, at least two power-generating sets must be provided. At least one set must be independent of the main propulsion plant. A generator not independent of the main propulsion plant must comply with § 111.10-4(d) of this chapter. With any one generating set stopped, the remaining set or sets must provide the power necessary for the loads required by this section.

#### § 129.320 Generators and motors.

(a) Each generator and motor, except a submersible-pump motor, must be—

(1) In an accessible space, adequately ventilated and as dry as practicable; and

(2) Mounted above the bilges to avoid damage by splash and to avoid contact with low-lying vapors.

(b) Each generator and motor must be designed for an ambient temperature of 50 °C (122 °F), except that—

(1) If the ambient temperature, in the space where a generator or motor is, does not exceed 40 °C (104 °F) under normal operating conditions, the generator or motor may be designed for an ambient temperature of 40 °C (104 °F); and

(2) A generator or motor designed for an ambient temperature of 40 °C (104 °F) may be used in a location where the ambient temperature is 50 °C (122 °F), if the generator or motor is derated to 80 percent of the full-load rating and if the rating or setting of the overcurrent devices of the generator or motor is reduced accordingly.

(c) For each generator rated at 50 volts or more, a voltmeter and an ammeter used for measuring voltage and current while the generator is in operation must be provided. For each alternating-current generator, a means for measuring frequency must also be provided. To ensure satisfactory operation of each generator, additional control equipment and measuring instruments, if needed, must also be provided.

(d) Each generator must have a nameplate attached to it indicating—

(1) Name of manufacturer, type of generator, and designation of frame;

(2) Output in kilowatts, or horsepower rating;

(3) Kind of rating (continuous, overload, or other);

(4) Amperes at rated load, voltage, and frequency;

(5) Number of phases, if applicable;

(6) Type of windings, if DC;

(7) When intended for connection in a normally grounded configuration, the grounding polarity; and

(8) For a generator derated to comply with paragraph (b)(2) of this section, the derated capacity.

(e) Each motor must have attached to it a nameplate containing the information required by Article 430 of NFPA 70.

#### § 129.323 Multiple generators.

If an OSV uses two or more generators to supply electricity for the ship's service loads, to comply with § 129.310(a) of this subpart, the following requirements must be met:

(a) Each generator must have an independent prime mover.

(b) The circuit breaker of a generator to be operated in parallel with another generator must comply with §§ 111.12-11(f), 111.30-19(a), and 111.30-25(d) of this chapter.

(c) The circuit breaker of a generator not to be operated in parallel with another generator must be interlocked to prevent that generator from being connected to the switchboard simultaneously with another.

**§ 129.326 Dual-voltage generators.**

If a dual-voltage generator is installed on an OSV—

(a) The neutral of the dual-voltage system must be solidly grounded at the switchboard's neutral bus and be accessible for checking the insulation resistance of the generator; and

(b) Ground detection must be provided that—

(1) For an alternating-current system, complies with § 111.05–27 of this chapter; and

(2) For a direct-current system, complies with § 111.05–29 of this chapter.

**§ 129.330 Distribution panels and switchboards.**

(a) Each distribution panel or switchboard must be in a location as dry as practicable, accessible, adequately ventilated, and protected from falling debris and dripping or splashing water.

(b) Each distribution panel or switchboard must be totally enclosed and of the dead-front type.

(c) Each switchboard must have nonconductive handrails.

(d) Each switchboard or main distribution panel must be fitted with a dripshield, unless the switchboard or distribution panel is of a type mounted deck-to-overhead and is not subject to falling objects or liquids from above.

(e) Each distribution panel and switchboard accessible from the rear must be constructed to prevent a person's accidental contact with energized parts.

(f) Working space must be provided around each main distribution panel and switchboard of at least 610 millimeters (24 inches) in front of the switchboard and, of at least 460 millimeters (18 inches) from the nearest bulkhead, stiffener, or frame behind the switchboard. Rear access is prohibited when the working space behind the switchboard is less than 460 millimeters (18 inches).

(g) Nonconductive mats or grating must be provided on the deck in front of each switchboard and, if the switchboard is accessible from the rear, on the deck behind the switchboard.

(h) Each uninsulated current-carrying part must be mounted on noncombustible, nonabsorbent, high-dielectric insulating material.

(i) Equipment mounted on a hinged door of an enclosure must be constructed or shielded so that no person will come into accidental contact with energized parts of the door-mounted equipment when the door is open and the circuit energized.

(j) Bus capacity of switchboards and main distribution panels must be sized

in accordance with § 111.30–19(a) of this chapter. Panelboards must have current rating of not less than the feeder-circuit capacity.

**§ 129.340 Cable and wiring.**

(a) If individual wires, rather than cables, are used in systems operating at a potential of greater than 50 volts, the wire and associated conduit must be run in a protected enclosure. The protected enclosure must have drain holes to prevent the buildup of condensation.

(b) Each cable and wire must—

(1) Have stranded copper conductors with sufficient current-carrying capacity for the circuit in which it is used;

(2) Be installed so as to avoid or reduce interference with radio reception and compass indication;

(3) Be protected from the weather;

(4) Be supported so as to avoid chafing or other damage;

(5) Be installed without sharp bends;

(6) Be protected by metal coverings or other suitable means, if in areas subject to mechanical abuse;

(7) Be suitable for low temperature and high humidity, if installed in refrigerated compartments;

(8) Be located outside a tank, unless it supplies power to equipment in the tank; and

(9) Have sheathing or wire insulation compatible with the fluid in a tank, when installed to comply with paragraph (b)(8) of this section.

(c) Cable and wire in power and lighting circuits must be #14 AWG or larger. Cable and wire in control and indicator circuits must be #22 AWG or larger, or be ribbon cable or similar, smaller, conductor-size cable recommended by the equipment manufacturer for use in circuits for low-power instrumentation, monitoring, or control.

(d) Cable and wire for power and lighting circuits must—

(1) Comply with Section 310–13 of the NEC (NFPA 70), except that no asbestos-insulated cable or dry-location cable may be used;

(2) Be listed by Underwriters Laboratories, Inc. as UL Boat or UL Marine Shipboard cable; or

(3) Comply with § 111.60–1 of this chapter for cable, and § 111.60–11 of this chapter for wire.

(e) Cable and wire serving vital systems listed in § 128.130(a) of this subchapter or serving emergency loads must be routed as far as practicable from areas at high risk for fire, such as galleys, laundries, and machinery spaces.

(f) Cable or wire serving duplicated equipment must be separated so that a casualty that affects one cable does not affect the other.

(g) Each connection to a conductor or a terminal part of a conductor must be made within an enclosure and—

(1) Have a pressure-type connector on each conductor;

(2) Have a solder lug on each conductor;

(3) Have a splice made with a pressure-type connector to a flexible lead or conductor; or

(4) Be splice-soldered, brazed, or welded to a flexible lead or conductor.

(h) A connector or lug of the set-screw type must not be used with a stranded conductor smaller than No. 14 AWG, unless there is a nonrotating follower that travels with the set screw and makes pressure contact with the conductor.

(i) Each pressure-type wire connector and lug must comply with UL 486A. No wire nuts may be used.

(j) Each terminal block must have terminal screws 6–32 or larger.

(k) Each wire connector used in conjunction with screw-type terminal blocks must be of the captive type such as the ring or the flanged-spade type.

(l) No cable may be spliced in—

(1) A hazardous location; or

(2) Another location, except—

(i) A cable installed in a subassembly may be spliced to a cable installed in another subassembly;

(ii) For a vessel receiving alterations, a cable may be spliced to extend a circuit;

(iii) A cable of large diameter or exceptional length may be spliced to facilitate its installation.

(iv) A cable may be spliced to replace a damaged section of itself if, before replacement of the damaged section, the insulation resistance of the remainder of the cable is measured, and the condition of the insulation is unimpaired.

(m) All material in a cable splice must be chemically compatible with other material in the splice and with the materials in the cable.

(n) Ampacities for conductors must comply with Section 310–15 of the NEC (NFPA 70), or with IEEE Standard 45, as appropriate.

(o) Each conductor must be sized so that the voltage drop at the load terminals does not exceed 10 percent.

(p) Each metallic covering of armored cable must—

(1) Be electrically continuous; and

(2) Be grounded at each end of the run to the—

(i) Hull (on a metallic vessel); or

(ii) Common ground plate (on a nonmetallic vessel); and

(3) Have final sub-circuits grounded at the supply end only.

(q) Each portable or temporary electric cord or cable must be constructed and

used in compliance with the requirements of § 111.60–13 of this chapter for flexible electric cord or cable.

**§ 129.350 Batteries—general.**

(a) Wherever a battery is charged, there must be natural or induced ventilation to dissipate the gases generated.

(b) Each battery must be located as high above the bilge as practicable within the space the battery is located in and be secured to protect against shifting due to roll, pitch, and heave motions or vibration of the vessel, and free from exposure to splash or spray of water.

(c) Each battery must be accessible for maintenance and removal.

(d) Each connection to a battery terminal must be made with a permanent connector, rather than with spring clips or other temporary clamps.

(e) Each battery must be mounted in a tray lined with, or constructed of, lead or other material resistant to damage by the electrolyte.

(f) Each battery charger must have an ammeter connected in the charging circuit.

(g) Unless the battery is adjacent to its distribution panel or switchboard that distributes power to the lighting, motor, and appliance circuits, the battery leads must have fuses in series with and as close as practicable to the battery.

(h) Each battery used for starting an engine must be located as close as possible to the engine or engines served.

**§ 129.353 Battery categories.**

This section applies to batteries installed to meet the requirements of § 129.310(a) for secondary sources of power to vital loads.

(a) *Large.* A large battery-installation is one connected to a battery charger having an output of more than 2 kW, computed from the highest possible charging current and rated voltage of the battery installed.

(b) *Small.* A small battery-installation is one connected to a battery charger having an output of 2 kW or less, computed from the highest possible charging current and rated voltage of the battery installed.

**§ 129.356 Battery installations.**

(a) *Large.* Each large battery-installation must be located in a locker, room, or enclosed box dedicated solely to the storage of batteries. Ventilation must be provided in accordance with § 111.15–10 of this chapter. Electrical equipment located within the battery enclosure must be approved by an independent laboratory for hazardous

locations of Class I, Division 1, Group B, and must meet subpart 111.105 of this chapter.

(b) *Small.* Each small battery-installation must be located in a well-ventilated space and protected from falling objects. No small battery-installation may be in a closet, storeroom, or similar space.

**§ 129.360 Semiconductor-rectifier systems.**

(a) Each semiconductor-rectifier system must have an adequate heat-removal system to prevent overheating.

(b) If a semiconductor-rectifier system is used in a propulsion system or in another vital system, it must—

(1) Have a current-limiting circuit;

(2) Have external overcurrent protection; and

(3) Comply with Sections 4/5.84.2 and 4/5.84.4 of the “Rules for Building and Classing Steel Vessels” of the American Bureau of Shipping.

**§ 129.370 Equipment grounding.**

(a) On a metallic vessel each metallic enclosure and frame of electrical equipment must be permanently grounded to the hull. On a nonmetallic vessel each enclosure and frame of electrical equipment must be bonded to each other and to a common ground by a conductor not normally carrying current.

(b) Each metallic case of instruments must be grounded. So must each secondary winding of instrument transformers.

(c) Each equipment grounding conductor must be sized to comply with section 250–95 of NEC (NFPA 70).

(d) Each nonmetallic mast and topmast must have a lightning-ground conductor.

**§ 129.375 System grounding.**

(a) If a grounded distribution system is provided, there must be only one connection to ground, regardless of the number of power sources. This connection must be at the main switchboard.

(b) On each metallic vessel, a grounded distribution system must be grounded to the hull. On each nonmetallic vessel, the neutral of a grounded system must be connected to a common ground plate, except that no aluminum grounding conductors may be used.

(c) On each nonmetallic vessel with a grounded distribution system, the common ground plate must have—

(1) Only one connection to the main switchboard; and

(2) The connection to itself readily accessible for checking.

(d) On each nonmetallic vessel with a ground plate provided for radio equipment, the plate must be connected to the common ground plate.

(e) Each insulated grounding-conductor of a cable must be identified by one of the following means:

(1) Wrapping of the cable with green braid or green insulation.

(2) Stripping of the insulation from the entire exposed length of the grounding-conductor.

(3) Marking of the exposed insulation of the grounding-conductor with green tape or green adhesive labels.

(f) No vessel's hull may carry current as a conductor except for—

(1) An impressed-current cathodic-protection system; or

(2) A battery system to start an engine.

(g) No cable armor may be used to ground electrical equipment or systems.

(h) Each receptacle outlet and attachment plug, for a portable lamp, tool, or similar apparatus operating at 100 or more volts, must have a grounding-pole and a grounding-conductor in the portable cord.

**§ 129.380 Overcurrent protection.**

(a) Overcurrent protection must be provided for each ungrounded conductor, to open the electric circuit if the current reaches a value that causes an excessive or dangerous temperature in the conductor or its insulation.

(b) Each conductor of a control, interlock, or indicator circuit, such as a conductor for an instrument, pilot light, ground-detector light, or potential transformer, must be protected by an overcurrent device.

(c) Each generator must be protected by an overcurrent device set at a value not exceeding 115 percent of the generator's full-load rating.

(d) Circuits of control systems for steering gear must be protected against short circuit.

(e) Each feeder circuit for steering gear must be protected by a circuit breaker that complies with §§ 58.25–55(a) and (b) of this chapter.

(f) Each branch circuit for lighting must be protected against overcurrent by either fuses or circuit breakers. Neither the fuses nor the circuit breakers may be rated at more than 30 amperes.

(g) Each conductor must be protected in accordance with its current-carrying capacity. If the allowable current-carrying capacity does not correspond to a standard size of device, the next larger overcurrent device may be used, provided it is less than 150 percent of the conductor's current-carrying capacity.

(h) An overcurrent device must be installed to protect each motor

conductor and control apparatus against overcurrent due to short circuit or ground fault. Each overcurrent device must be capable of carrying the starting current of the motor.

(i) An emergency switch must be provided in each normally ungrounded main supply conductor from a battery. The switch must be accessible from the battery and located as close as practicable to it.

(j) No grounded conductor of a circuit may be disconnected by a switch or circuit breaker unless the ungrounded conductors are all simultaneously disconnected.

(k) A means of disconnect must be provided on the supply side of and adjacent to each fuse, to de-energize the fuse for inspection and maintenance.

(l) A way for locking the means of disconnect open must be provided unless the means of disconnect for a fused circuit is within sight of the equipment that the circuit supplies.

(m) Each fuse must be of the cartridge type and be listed by Underwriters Laboratories (UL) or another independent laboratory recognized by the Commandant.

(n) Each circuit breaker must meet UL 489 and be of the manually-reset type designed for—

- (1) Inverse delay;
- (2) Instantaneous short-circuit protection; and
- (3) Switching duty if the breaker is used as a switch.

(o) Each circuit breaker must indicate whether it is open or closed.

#### § 129.390 Shore power.

Each vessel that has an electrical system operating at more than 50 volts and has provisions for receiving shore power must meet the requirements of this section:

(a) A shore-power-connection box or receptacle must be permanently installed at a convenient location.

(b) A cable connecting the shore-power-connection box or receptacle to the switchboard or main distribution panel must be permanently installed.

(c) A circuit breaker must be provided at the switchboard or main distribution panel for the shore-power connection.

(d) The circuit breaker, required by paragraph (c) of this section, must be interlocked with the feeder circuit breakers for the vessel's power sources to preclude the vessel's power sources and shore power from energizing the vessel's switchboard simultaneously, except in cases where system devices permit safe momentary paralleling of OSV power with shore power.

#### § 129.395 Radio installations.

A separate circuit, with overcurrent protection at the switchboard, must be provided for at least one radio installation. Additional radios, if installed, may be powered from a local lighting power source, such as the pilothouse lighting panel, provided each radio power source has a separate overcurrent protection device.

#### Subpart D—Lighting Systems

##### § 129.410 Lighting fixtures.

(a) Each globe, lens, or diffuser of a lighting fixture must have a high-strength guard or be made of high-strength material, except in accommodations, the pilothouse, the galley, or similar locations where the fixture is not subject to damage.

(b) No lighting fixture may be used as a connection box for a circuit other than the branch circuit supplying the fixture.

(c) Each lighting fixture must be installed as follows:

(1) Each lighting fixture and lampholder must be fixed. No fixture may be supported by the screw shell of a lampholder.

(2) Each pendant-type lighting fixture must be suspended by and supplied through a threaded rigid-conduit stem.

(3) Each tablelamp, desk lamp, floorlamp, or similar equipment must be so secured in place that it cannot be displaced by the roll, pitch, or heave or by the vibration of the vessel.

(d) Each lighting fixture in an electrical system operating at more than 50 volts must comply with UL 595, "Marine Type Electric Lighting Fixtures." A lighting fixture in an accommodation space, radio room, galley, or similar interior space may comply with UL 57, "Electric Lighting Fixtures," UL 1570, "Fluorescent Lighting Fixtures," UL 1571, "Incandescent Lighting Fixtures," UL 1572, "High Intensity Discharge Lighting Fixtures," UL 1573, "Stage and Studio Lighting Units," or UL 1574, "Track Lighting Systems," as long as the general marine requirements of UL 595 are satisfied.

##### § 129.420 Branch circuits for lighting on OSVs of 100 or more gross tons.

On each vessel of 100 or more gross tons, each branch circuit for lighting must comply with § 111.75-5 of this chapter, except that—

(a) Appliance loads, electric-heater loads, and isolated small-motor loads may be connected to a lighting-distribution panelboard; and

(b) Branch circuits, other than for lighting, connected to the lighting-distribution panelboard permitted by

paragraph (a) of this section may have fuses or circuit breakers rated at more than 30 amperes.

##### § 129.430 Navigational lighting.

(a) Each vessel of less than 100 gross tons and less than 19.8 meters (65 feet) in length must have navigational lighting in compliance with the applicable navigation rules.

(b) Each vessel of 100 or more gross tons, or 19.8 meters (65 feet) or more in length, must have navigational lighting in compliance with the applicable navigation rules and with § 111.75-17(d) of this chapter.

##### § 129.440 Emergency lighting.

(a) A vessel of less than 100 gross tons must have adequate emergency lighting fitted along the line of escape to the main deck from accommodations and working (machinery) spaces below the main deck.

(b) The emergency lighting required by paragraph (a) of this section must automatically actuate upon failure of the main lighting. Unless a vessel is equipped with a single source of power for emergency lighting, it must have individual battery-powered lighting that is—

- (1) Automatically actuated upon loss of normal power;
- (2) Not readily portable;
- (3) Connected to an automatic battery-charger; and
- (4) Of enough capacity for 6 hours of continuous operation.

##### § 129.450 Portable lighting.

Each vessel must be equipped with at least two operable, portable, battery-powered lights. One of these lights must be located in the pilothouse, another at the access to the engine room.

#### Subpart E—Miscellaneous Electrical Systems

##### § 129.510 Lifeboat winches.

Each lifeboat winch operated by electric power must comply with subparts 111.95 and be approved under approval series in subparts 160.015 or 160.115 of this chapter.

##### § 129.520 Hazardous areas.

(a) No OSV that carries flammable or combustible liquid with a flashpoint of below 140 °F (60 °C), or carries hazardous cargoes on deck or in integral tanks, or is involved in servicing wells, may have electrical equipment installed in pump rooms, in hose-storage spaces, or within 3 meters (10 feet) of a source of vapor on a weather deck unless the equipment is explosion-proof or intrinsically safe under § 111.105-9 or 111.105-11 of this chapter.

(b) No electrical equipment may be installed in any locker used to store paint, oil, turpentine, or other flammable liquid unless the equipment is explosion-proof or intrinsically safe under § 111.105-9 or § 111.105-11 of this chapter.

(c) Equipment that is explosion-proof and intrinsically safe must comply with subpart 111.105 of this chapter.

**§ 129.530 General alarm.**

Each vessel must be fitted with a general alarm that complies with subpart 113.25 of this chapter.

**§ 129.540 Remote stopping-systems on OSVs of 100 or more gross tons.**

(a) Except as provided by paragraph (b) of this section, each vessel must be fitted with remote stopping-systems that comply with subpart 111.103 of this chapter.

(b) The following remote stopping-systems may substitute for remote stopping-systems that must comply with subpart 111.103 of this chapter:

- (1) For each propulsion unit, in the pilothouse.
- (2) For each discharge pump for bilge slop or dirty oil, at the deck discharge.
- (3) For each powered ventilation system, outside the space ventilated.
- (4) For each fuel-oil pump, outside the space containing the pump.
- (5) For each cargo-transfer pump for combustible and flammable liquid, at each transfer-control station.

(c) Remote stopping-systems required by this section may be combined.

**§ 129.550 Power for cooking and heating.**

(a) Equipment for cooking and heating must be suitable for marine use. Equipment designed and installed to comply with ABYC Standards A-3 and A-7 or Chapter 6 of NFPA 302 meets this requirement.

(b) The use of gasoline for cooking, heating, or lighting is prohibited.

(c) The use of liquefied petroleum gas for cooking, heating, or other purposes must comply with subpart 58.16 of this chapter.

(d) Each electric space-heater must be provided with a thermal cut-out to prevent overheating.

(e) Each element of an electric space-heater must be enclosed, and the case or jacket of the element made of a corrosion-resistant material.

(f) Each electrical connection for a cooking appliance must be drip-proof.

**§ 129.560 Engine-order telegraphs.**

No OSV need carry an engine-order telegraph, provided the vessel meets the requirements of § 113.35-3(d) of this chapter.

**PART 130—VESSEL CONTROL, AND MISCELLANEOUS EQUIPMENT AND SYSTEMS**

**Subpart A—Vessel Control**

Sec.

- 130.110 Internal communications on OSVs of less than 100 gross tons.  
 130.120 Propulsion control.  
 130.130 Steering on OSVs of less than 100 gross tons.  
 130.140 Steering on OSVs of 100 or more gross tons.

**Subpart B—Miscellaneous Equipment and Systems**

- 130.210 Radiotelegraph and radiotelephone.  
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 130.240 Anchors and chains for OSVs of 100 or more gross tons.  
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**Subpart C—Navigational Equipment**

- 130.310 Radar.  
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**Subpart D—Automation of Unattended Machinery Spaces**

- 130.400 Applicability.  
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 130.420 Controls.  
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 130.440 Communications system.  
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 130.460 Placement of machinery alarms.  
 130.470 Fire alarms.  
 130.480 Test procedure and operations manual.

**Authority:** 46 U.S.C. 3306; 49 CFR 1.46.

**Subpart A—Vessel Control**

**§ 130.110 Internal communications on OSVs of less than 100 gross tons.**

Each vessel of less than 100 gross tons equipped with an independent auxiliary means of steering, as required by § 130.130(b) of this subpart, must have a fixed means of communication between the pilothouse and the place where the auxiliary means of steering is controlled.

**§ 130.120 Propulsion control.**

- (a) Each vessel must have—  
 (1) A propulsion-control system operable from the pilothouse; and  
 (2) A means at each propulsion engine of readily disabling the propulsion-control system to permit local operation.  
 (b) Each propulsion-control system operable from the pilothouse must enable—

- (1) Control of the speed of each propulsion engine;
- (2) Control of the direction of propeller-shaft rotation;

(3) Control of propeller pitch, if a controllable-pitch propeller is fitted; and

(4) Shutdown of each propulsion engine.

(c) The propulsion-control system operable from the pilothouse may constitute the remote stopping-system required by § 129.540 of this subchapter.

(d) Each propulsion-control system, including one operable from the pilothouse, must be designed so that no one complete or partial failure of an easily replaceable component of the system allows the propulsion engine to overspeed or the pitch of the propeller to increase.

**§ 130.130 Steering on OSVs of less than 100 gross tons.**

(a) Each OSV of less than 100 gross tons must have a steering system that complies with—

- (1) Section 130.140 of this subpart; or
- (2) This section.

(b) Except as provided by paragraph (i) of this section, each vessel must have a main and an independent auxiliary means of steering.

(c) The main means of steering (main steering gear) must be—

- (1) Of adequate strength for, and capable of, steering the OSV at each service speed;
- (2) Designed to operate at maximum astern speed without being damaged; and
- (3) Capable of moving the rudder from 35 degrees on one side to 30 degrees on the other side in no more than 28 seconds with the vessel moving ahead at maximum service speed.

(d) Control of the main steering gear must be available from the pilothouse, including control of any necessary ancillary device (motor, pump, valve, or the like). If a power-driven main steering gear is used, a pilot light must be installed in the pilothouse to indicate operation of the power units.

(e) The auxiliary means of steering (auxiliary steering gear) must be—

- (1) Of adequate strength for steering the OSV at navigable speed;
- (2) Capable of steering the vessel at navigable speed; and

(3) Controlled from a place that—

- (i) Can communicate with the pilothouse; or
- (ii) Enables the master to safely maneuver the vessel.

(f) The steering gear must be designed so that transfer from the main steering gear or its control to the auxiliary steering gear or its control can be achieved rapidly. Any tools or equipment necessary for transfer must be readily available. Instructions for transfer must be posted.

(g) Each vessel must have instantaneous protection against short circuit for electrical-power circuits and control circuits, the protection sized and located to comply with §§ 58.25–55 (d) and (e) of this chapter.

(h) A rudder-angle indicator independent of the control of the main steering gear must be installed at the steering-control station in the pilothouse.

(i) No auxiliary steering gear need be installed if—

(1) The main steering gear, including power systems, is installed in duplicate; or

(2) Multiple-screw propulsion—with independent control of propulsion from the pilothouse for each screw and with a means to restrain and center the rudder—is installed, and if that control is capable of steering the OSV.

(j) Each vessel with duplicate (parallel but cross-connected) power systems for the main steering gear by way of compliance with paragraph (i)(1) of this section may use one of the systems for other purposes if—

(1) Control of the subordinate parallel system is located at the steering-control station in the pilothouse;

(2) Full power is available to the main steering gear when the subordinate parallel system is not in operation;

(3) The subordinate parallel system can be isolated from the means of steering, and instructions on procedures for isolating it are posted; and

(4) The subordinate parallel system is materially equivalent to the steering system.

#### § 130.140 Steering on OSVs of 100 or more gross tons.

(a) Each OSV of 100 or more gross tons must have a means of steering that meets the—

(1) Applicable requirements of subchapters F and J of this chapter; or

(2) Requirements for a hydraulic-helm steering-system in paragraph (b) of this section.

(b) Each hydraulic-helm steering-system must have the following:

(1) A main steering gear of adequate strength for, and capable of, steering the vessel at every service speed without being damaged at maximum astern speed.

(2) A hydraulic system with a maximum allowable working pressure of not more than 12,411 kPa (1,800 psi), dedicated to steering.

(3) Piping materials that comply with subchapter F of this chapter, and piping thickness of at least schedule 80.

(4) Each fore-and-aft run of piping located as far inboard as practicable.

(5) Rudder stops.

(6) Either—

(i) Two steering pumps in accordance with § 130.130(c)(3) of this part; or

(ii) A single hydraulic sump of the “cascading overflow” type with a centerline bulkhead open only at the top, if each half has enough capacity to operate the system.

(7) Control of the main steering gear from the pilothouse, including—

(i) Control from the helm;

(ii) Control of any necessary ancillary device (motor, pump, valve, or the like); and

(iii) Adequate visibility when going astern.

(8) Multiple-screw propulsion with independent control of propulsion from the pilothouse, complying with § 130.120 of this part and being capable of steering the vessel.

(9) Dual hydraulic cylinders arranged so that either cylinder can be readily isolated, permitting the other cylinder to remain in service and move each rudder.

(10) The steering alarms and indicators required by § 58.25–25 of this chapter, located in the pilothouse.

(11) Instantaneous protection against short circuit for electrical power, and control circuits sized and located as required by §§ 58.25–55 (d) and (e) of this chapter.

(12) A rudder-angle indicator, at the steering-control station in the pilothouse, that is independent of the control of the main steering gear.

(13) Means to locally start and stop the steering pumps.

(14) Means to isolate any auxiliary means of steering so as not to impair the reliability and availability of the control required by paragraph (b)(7) of this section.

(15) Manual capability to center and steady the rudder if the vessel loses normal steering power.

(c) For compliance with paragraph (b) of this section, a common piping system for pumps, helm, and cylinders is acceptable.

#### Subpart B—Miscellaneous Equipment and Systems

##### § 130.210 Radiotelegraph and radiotelephone.

Each vessel must comply with 47 CFR part 80 as applicable.

##### § 130.220 Design of equipment for cooking and heating.

(a) Doors on each cooking appliance must be provided with heavy-duty hinges and locking-devices to prevent accidental opening in heavy weather.

(b) Each cooking appliance must be installed so as to prevent its movement in heavy weather.

(c) Each grill or similar cooking appliance must have means to collect grease or fat and to prevent its spillage onto wiring or the deck.

(d) On each cooking appliance, grab rails must be installed when determined by the cognizant OCMI to be necessary for safety.

(e) On each cooking appliance, sea rails, with suitable barriers to prevent accidental movement of cooking pots, must be installed.

(f) Each heater must be constructed and installed so as to prevent the hanging from it of items such as towels and clothing.

##### § 130.230 Protection from refrigerants.

(a) For each refrigeration system that exceeds 0.6 cubic meters (20 cubic feet) of storage capacity if using ammonia or other hazardous gas, or exceeds 28.3 cubic meters (1,000 cubic feet) of storage capacity if using a fluorocarbon, as a refrigerant, there must be available one pressure-demand, open-circuit, self-contained breathing apparatus, approved by the National Institute for Occupational Safety and Health (NIOSH) and having at a minimum a 30-minute air supply, and a full facepiece.

(b) Each self-contained breathing apparatus must be stowed convenient to, but outside, the space containing the refrigeration equipment.

(c) A complete recharge in the form of a spare charge must be carried for each self-contained breathing apparatus. The spare charge must be stowed with the equipment it is to reactivate.

(d) The self-contained breathing apparatus in a fireman's outfit, if fitted, complies with this section.

##### § 130.240 Anchors and chains for OSVs of 100 or more gross tons.

(a) Each OSV of 100 or more gross tons must be fitted with anchors and chains meeting the applicable standards set by the ABS for classed vessels, including equipment, except as permitted by paragraphs (b) and (c) of this section.

(b) As well as the standards incorporated by paragraph (a) of this section, each vessel of under 61 meters (200 feet) in length and with an equipment number from the ABS of less than 150 may be equipped with either—

(1) One anchor of the tabular weight and one-half the tabulated length of anchor chain listed in the applicable standard; or

(2) Two anchors of one-half the tabular weight with the total length of anchor chain listed in the applicable standard, if both anchors are ready for use at any time and if the windlass is capable of heaving in either anchor.

(c) Standards of classification societies other than the ABS may be used, upon approval of the Commandant.

**§ 130.250 Mooring and towing equipment for OSVs of less than 100 gross tons.**

Each OSV of less than 100 gross tons must be fitted with mooring and towing equipment meeting the applicable requirements for small passenger vessels in § 184.300 of this chapter.

**Subpart C—Navigational Equipment**

**§ 130.310 Radar.**

Each vessel of 100 or more gross tons must be fitted with a general marine radar in the pilothouse.

**§ 130.320 Electronic position-fixing device.**

Each vessel must be equipped with an electronic position-fixing device satisfactory for the area in which the vessel operates.

**§ 130.330 Charts and nautical publications.**

(a) Except as provided by paragraph (b) or (c) of this section, as appropriate for the intended voyage, each vessel must carry adequate and up-to-date—

- (1) Charts of large enough scale to make safe navigation possible;
- (2) U.S. Coast Pilot or similar publication;
- (3) Coast Guard Light List;
- (4) Tide Tables published by the National Ocean Service;
- (5) Local Notice or Notices to Mariners; and

(6) Current Tables published by the National Ocean Service, or a river-current publication issued by the U.S. Army Corps of Engineers or by a river authority, or both.

(b) Any vessel may carry, instead of the complete publications listed in paragraph (a) of this section, extracts from them for areas it will transit.

(c) When operating in foreign waters, a vessel may carry an appropriate foreign equivalent of any item required by paragraph (a) of this section.

**§ 130.340 Compass.**

Each vessel must be fitted with a compass suitable for the intended service of the vessel. Except aboard a vessel limited to daytime operation, the compass must be illuminated.

**Subpart D—Automation of Unattended Machinery Spaces**

**§ 130.400 Applicability.**

This subpart applies to each vessel of 100 or more gross tons where automated systems either replace specific personnel in the control and observation

of the propulsion system and machinery spaces or reduce the level of crew associated with the vessel's engine department.

**§ 130.410 General.**

(a) Arrangements must be such that under any operating condition, including maneuvering, the safety of the vessel is equivalent to that of the same vessel with the machinery spaces fully tended and under direct manual supervision.

(b) Acceptance by the Coast Guard of automated systems to replace specific crew members or to reduce overall requirements for crew members depends upon the—

- (1) Capabilities of the automated system;
- (2) Combination of crew members, equipment, and systems necessary to ensure the safety of the vessel, personnel, and environment in each operating condition, including maneuvering; and
- (3) Ability of the crew members to perform each operational evolution, including to cope with emergencies such as fire and failure of control or monitoring systems.

**§ 130.420 Controls.**

Each piece of machinery under automatic control must have an alternative manual means of control.

**§ 130.430 Pilothouse control.**

Each OSV must have, at the pilothouse, controls to start a fire pump, charge the fire main, and monitor the pressure in the fire main.

**§ 130.440 Communications system.**

(a) Each OSV must have a communications system to immediately summon a crew member to the machinery space wherever one of the alarms required by § 130.460 of this subpart is activated.

(b) The communications system must be either—

- (1) An alarm that—
  - (i) Is dedicated for this purpose;
  - (ii) Sounds in the crew accommodations and the normally manned spaces; and
  - (iii) Is operable from the pilothouse;

or

(2) A telephone operated from the pilothouse that reaches the master's stateroom, engineer's stateroom, engine room, and crew accommodations that either—

- (i) Is a sound-powered telephone; or
- (ii) Gets its power from the emergency switchboard or from an independent battery continuously charged by its own charger.

**§ 130.450 Machinery alarms.**

(a) Each alarm required by § 130.460 of this subpart must be of the self-monitoring type that will both show visibly and sound audibly upon an opening or break in the sensing circuit.

(b) The visible alarm must show until it is manually acknowledged and the condition is corrected.

(c) The audible alarm must sound until it is manually silenced.

(d) No silenced alarm may prevent any other audible alarm from sounding.

(e) Each OSV must be provided with means for testing each visible and audible alarm.

(f) Each OSV must provide battery power for the alarm required by § 130.460(a)(8) of this subpart.

**§ 130.460 Placement of machinery alarms.**

(a) Visible and audible alarms must be installed at the pilothouse to indicate the following:

- (1) Loss of power for propulsion control.
- (2) Loss of power to the steering motor or for control of the main steering gear.
- (3) Engine-room fire.
- (4) High bilge-level.
- (5) Low lube-oil pressure for each main propulsion engine and each prime mover of a generator.
- (6) For each main propulsion engine and each prime mover of a generator—
  - (i) High lube-oil temperature; and
  - (ii) High jacket-water temperature.
- (7) For each reduction gear and each turbocharger with a pressurized oil system—
  - (i) Low lube-oil pressure; and
  - (ii) High lube-oil temperature.
- (8) Loss of normal power for the alarms listed in paragraphs (a)(1) through (a)(7) of this section.

(b) Sensors for the high-bilge-level alarm required by paragraph (a)(4) of this section must be installed in—

- (1) Each space below the deepest load waterline that contains pumps, motors, or electrical equipment; and
- (2) The compartment that contains the rudder post.

(c) Centralized displays must be installed in the machinery spaces to allow rapid evaluation of each problem detected by the alarms required by paragraph (a) of this section. Equipment-mounted gauges or meters are acceptable for this purpose, if they are grouped at a central site.

**§ 130.470 Fire alarms.**

(a) Each fire detector and control unit must be of a type specifically approved by the Commandant (G-MSE).

(b) No fire-alarm circuit for the engine room may contain a fire detector for any other space.



(c) The number and placement of fire detectors must be approved by the cognizant OCMI.

**§ 130.480 Test procedure and operations manual.**

(a) A procedure for tests to be conducted on automated equipment by the operator and the Coast Guard must be submitted to comply with § 127.110 of this subchapter.

(b) The procedure for tests must—

- (1) Be in a sequential-checkoff format;
- (2) Include the required alarms, controls, and communications; and
- (3) Set forth details of the tests.

(c) Details of the tests must specify status of equipment, functions necessary to complete the tests, and expected results.

(d) No tests may simulate conditions by misadjustments, artificial signals, or improper wiring.

(e) A detailed operations manual that describes the operation and indicates the location of each system installed to comply with this part must be submitted to comply with § 127.110 of this subchapter.

**PART 131—OPERATIONS**

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Sec.

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131.980 Lookouts and watches.

**Authority:** 33 U.S.C. 1321(j); 46 U.S.C. 3306, 6101, 10104; E.O. 12234, 3 CFR, 1980

Comp., p. 277; E.O. 12777, 3 CFR, 1991 Comp., p. 351; 49 CFR 1.46.

**Subpart A—Notice of Casualty and Records of Voyage**

**§ 131.110 Notice and records.**

Each vessel must meet the requirements of part 4 of this chapter for reporting marine casualties and retaining voyage records.

**Subpart B—Markings on Vessels**

**§ 131.210 Hulls.**

The hull of each vessel must be marked as required by parts 67 and 69 of this chapter.

**§ 131.220 Drafts.**

(a) Each vessel must have the drafts of the vessel plainly and legibly marked upon the stem and upon the sternpost or rudderpost, or at any place at the stern of the vessel that may be necessary for easy observance. The bottom of each mark must indicate the draft.

(b) Each draft must be taken from the bottom of the keel to the surface of the water at the location of the marks.

(c) When, because of raked stem or cutaway skeg, the keel does not extend forward or aft to the draft markings, the datum line from which the draft is taken must be the line of the bottom of the keel projected forward or aft, as the case may be, to where the line meets that of the draft markings projected downward.

(d) When a skeg or other appendage extends below the line of the keel, the draft at the end of the vessel adjacent to that appendage must be measured to a line tangent to the lowest part of the appendage and parallel to the line of the bottom of the keel.

(e) Drafts must be separated so that the projections of the marks onto a vertical plane are of uniform height, equal to the vertical spacing between consecutive marks.

(f) Marks must be painted in a color contrasting with that of the hull.

(g) Where marks are obscured because of operational constraints or by protrusions, the vessel must be fitted with a reliable draft-indicating system from which the drafts at bow and stern can be determined.

**§ 131.230 Loadlines and decklines.**

Each vessel assigned a loadline must have loadline markings and deck-line markings permanently scribed or embossed as required by subchapter E of this chapter.

**Subpart C—Preparations for Emergencies****§ 131.310 List of crew members and offshore workers.**

(a) The master of each vessel shall keep a correct list containing the name of each person that embarks upon and disembarks from the vessel.

(b) The list required by paragraph (a) of this section must be prepared before the vessel's departure on a voyage, and deposited ashore—

(1) At the facility from which the crew members and offshore workers embarked;

(2) In a well-marked place at the vessel's normal berth; or

(3) With a representative of the owner or managing operator of the vessel.

**§ 131.320 Safety orientation for offshore workers.**

(a) Before a vessel gets under way on a voyage, the master shall ensure that suitable public announcements are made informing each offshore worker of—

(1) In general terms, emergency and evacuation procedures;

(2) Locations of emergency exits and of embarkation areas for survival craft;

(3) Locations of stowage of lifejackets and immersion suits;

(4) With demonstration, proper method or methods of donning and adjusting lifejackets and immersion suits of the type or types carried on the vessel;

(5) Locations of the instruction placards for lifejackets and other lifesaving devices;

(6) Explanation that each offshore worker shall don an immersion suit and a lifejacket when the master determines that hazardous conditions do or might exist but that offshore workers may don lifejackets whenever they feel it necessary;

(7) Which hazardous conditions might require the donning of lifejackets and immersion suits;

(8) Types and locations of any other lifesaving device carried on the vessel;

(9) Locations and contents of the "Emergency Instructions" required by § 131.330;

(10) Survival craft to which assigned;

(11) Any hazardous materials on the vessel; and

(12) Any conditions or circumstances that constitute a risk to safety.

(b) The master of each vessel shall ensure that each offshore worker boarding the vessel on a voyage after the initial public announcement has been made, as required by paragraph (a) of this section, also hears the information in paragraph (a) of this section.

**§ 131.330 Emergency instructions.**

(a) Except as otherwise provided by this section, the master of each vessel shall prepare and post durable emergency-instruction placards in conspicuous locations accessible to the crew members and offshore workers.

(b) The instruction placards must contain the recommended "Emergency Instructions" listed in § 131.340 that, in the judgment of the cognizant OCMI, apply. The placards must be further designed to address the equipment, arrangement, and operation peculiar to each vessel.

**§ 131.340 Recommended placard for emergency instructions.**

The following are the recommended format and content of the placard for emergency instructions:

**EMERGENCY INSTRUCTIONS**

(a) *Rough weather at sea, crossing of hazardous bars, or flooding.*

(1) Close each watertight and weathertight door, hatch, and air-port to prevent taking water aboard or further flooding in the vessel.

(2) Keep bilges dry to prevent loss of stability from water in bilges. Use power-driven bilge pump, hand pump, and buckets to dewater.

(3) Align fire pumps to serve as bilge pumps if possible.

(4) Check, for leakage, each intake and discharge line that penetrates the hull.

(5) Offshore workers remain seated and evenly distributed.

(6) Offshore workers don immersion suits (if required aboard) or lifejackets if the going becomes very rough, if the vessel is about to cross a hazardous bar, if flooding begins, or when ordered to by the master.

(7) Never abandon the vessel unless actually forced to, or ordered to by the master.

(8) Prepare survival craft—life floats, (inflatable) rafts, (inflatable) buoyant apparatus, and boats—for launching.

(b) *"Man overboard"*.

(1) Throw a ring buoy into the water as close to the person overboard as possible.

(2) Post a lookout to keep the person overboard in sight.

(3) Launch the rescue boat and maneuver it to pick up the person overboard, or maneuver the vessel to pick up the person.

(4) Have a crew member put on an immersion suit or lifejacket, have a safety line made fast to the crew member, and have the crew member stand by to jump into the water to assist the person overboard if necessary.

(5) If the person overboard is not immediately located—

(i) Notify other vessels in the vicinity, and the Coast Guard; and

(ii) Continue searching until released by the Coast Guard.

(c) *Fire.*

(1) Cut off air to the fire: close hatches, ports, doors, manual ventilators, and the like and shut off the ventilation system.

(2) De-energize electrical systems supplying the affected compartment.

(3) Immediately use a portable fire extinguisher aimed at the base of the flames. Never use water on electrical fires.

(4) If the fire is in machinery spaces, shut off the fuel supply and ventilation system and activate any fixed extinguishing-system.

(5) Maneuver the vessel to minimize the effect of wind on the fire.

(6) If unable to control the fire, notify other vessels in the vicinity, and the Coast Guard.

(7) Move offshore workers away from fire; have them don lifejackets and, if necessary, prepare to abandon the vessel.

**§ 131.350 Station bill.**

(a) The master of each vessel shall post a station bill if the vessel's Certificate of Inspection requires more than four crew members, including the master.

(b) The station bill must be posted in the pilothouse and in conspicuous places in crew members' and offshore workers' accommodations.

(c) The station bill must set forth the special duties and duty stations of each crew member for various emergencies. The duties must, as far as possible, be comparable to and compatible with the regular work of the member. The duties must include at least the following and should comprise any other duties necessary for the proper handling of a particular emergency:

(1) The closing of hatches, air-ports, watertight doors, vents, and scuppers, and of intake valves and discharge lines that penetrate the hull; the stopping of fans and ventilating systems; and the operating of safety equipment.

(2) The preparing and launching of survival craft and rescue boats.

(3) The extinguishing of fire.

(4) The mustering of offshore workers, which includes—

(i) Assembling them and seeing that they are properly dressed and have donned their immersion suits and lifejackets; and

(ii) Directing them to their appointed stations.

**§ 131.360 Responsibilities of licensed or certificated individuals.**

Nothing in the emergency instructions or in any station bill required by this subpart exempts any licensed or certificated individual from the exercise of good judgment in an emergency.

**Subpart D—Sufficiency and Supervision of Crew of Survival Craft****§ 131.410 Certificate of proficiency.**

A merchant mariner's document with an endorsement of lifeboatman or another inclusive rating under part 12 of this title is evidence of training in survival craft and serves as a certificate of proficiency. For this subpart, a "certificated" person is a person holding a merchant mariner's document with such an endorsement.

**§ 131.420 Manning and supervision.**

(a) There must be enough trained persons aboard each survival craft to muster and assist untrained persons.

(b) Except as permitted by paragraph (c)(2) of this section, there must be enough deck officers, able seamen, or other certificated persons aboard each survival craft to manage the launching and handling of the survival craft.

(c) One person must be placed in charge of each survival craft to be used.

(1) Except as permitted by paragraph (c)(2) of this section, the person in command must be a deck officer, able seaman, or other certificated person.

(2) Considering the nature of the voyage, the number of persons permitted aboard, and the characteristics of the vessel, including gross tonnage, the cognizant OCMI may permit persons practiced in the handling of liferafts to be placed in charge of liferafts instead of persons required under paragraph (c)(1) of this section.

(3) A deck officer, able seaman, or other certificated person shall serve as second-in-command for each lifeboat either—

(i) Carried on a vessel in ocean service; or

(ii) Permitted to carry more than 40 persons.

(d) The person in charge and the second-in-command of each survival craft shall have a list of crew members and offshore workers assigned to the craft and shall see that the crew members are acquainted with their duties.

(e) Each motorized survival craft must have assigned a person capable of operating the engine and carrying out minor adjustments.

(f) The master shall ensure that the persons required under paragraphs (a),

(b), and (c) of this section are equitably distributed among the vessel's survival crafts.

**Subpart E—Tests, Drills, and Inspections****§ 131.505 Steering gear, whistle, and means of communication.**

(a) On each vessel expected to be away from shore for more than 48 hours, the master shall examine and test the steering gear, the whistle, and the means of communication between the pilothouse and the engine room 12 or fewer hours before departure. On every other vessel, the master shall do the same at least once a week.

(b) The date of each test and examination and the condition of the equipment must be noted in the vessel's logbook.

**§ 131.510 Draft and loadline markings.**

(a) The master of each vessel on an ocean or coastwise voyage shall enter in the vessel's logbook the drafts of the vessel, forward and aft, when leaving port.

(b) The master of each vessel subject to the requirements of subchapter E of this chapter shall, upon departure from port on an ocean or coastwise voyage, enter in the vessel's logbook a statement of the position of the loadline markings, port and starboard, relative to the surface of the water in which the vessel is then floating.

(c) If the master, when recording drafts, compensates for the density of the water in which the vessel is floating, he or she shall note this density in the vessel's logbook.

**§ 131.513 Verification of compliance with applicable stability requirements.**

(a) After loading but before departure, and at other times necessary to assure the safety of the vessel, the master shall verify that the vessel complies with requirements in its trim-and-stability book, stability letter, Certificate of Inspection, and Loadline Certificate, whichever apply, and then enter a statement of the verification in the log book. The vessel may not leave port until it is in compliance with these requirements.

(b) When determining compliance with applicable stability requirements, the master shall ascertain the vessel's draft, trim, and stability as necessary; and any stability calculations made in support of the determination must remain aboard the vessel for the duration of the voyage.

**§ 131.515 Periodic sanitary inspections.**

(a) The master shall make periodic inspections of the quarters, toilet and

washing spaces, serving pantries, galleys, and the like, to ensure that those spaces are maintained in a sanitary condition.

(b) The master shall enter in the vessel's logbook the results of these inspections.

**§ 131.520 Hatches and other openings.**

Before any vessel leaves protected waters, the master shall ensure that the vessel's exposed cargo hatches and other openings in the hull are closed; made properly watertight by the use of tarpaulins, gaskets, or similar devices; and properly secured for sea.

**§ 131.525 Emergency lighting and power.**

(a) The master of each vessel shall ensure that the emergency lighting and power systems are tested at least once each week that the vessel is operated, to verify that they work.

(b) The master shall ensure that emergency generators driven by internal-combustion engines run under load for at least 2 hours at least once each month that the vessel is operated.

(c) The master shall ensure that storage batteries driving fitted systems for emergency lighting and power are tested at least once each 6 months that the vessel is operated, to demonstrate the ability of the batteries to supply the emergency loads for the period specified by Table 112.05-5(a) of this chapter for cargo vessels.

(d) The date of each test and the condition and performance of the apparatus must be noted in the vessel's logbook.

**§ 131.530 Abandon-ship training and drills.**

(a) Material for abandon-ship training must be aboard each vessel. The material must consist of a manual of one or more volumes, or audiovisual training aids, or both.

(1) The material must contain instructions and information about the lifesaving appliances aboard the vessel and about the best methods of survival. Any manual must be written in easily understood terms, illustrated wherever possible.

(2) If a manual is used, there must be a copy in each messroom and recreation room for crew members or in each stateroom for them. If audiovisual aids are used, they must be incorporated in the training sessions aboard under paragraph (d) of this section.

(3) The material must explain the—

(i) Method of donning immersion suits and lifejackets carried aboard;

(ii) Mustering at assigned stations;

(iii) Proper boarding, launching, and clearing of survival craft and rescue boats;

(iv) Method of launching survival craft by people within them;

(v) Method of releasing survival craft from launching-appliances;

(vi) Use of devices for protecting survival craft in launching-areas, where appropriate;

(vii) Illumination of launching-areas;

(viii) Use of each item of survival equipment;

(ix) Instructions for emergency repair of lifesaving appliances;

(x) Use of radio lifesaving-appliances, with illustrations;

(xi) Use of sea anchors;

(xii) Use of engine and accessories, where appropriate;

(xiii) Recovery of survival craft and rescue boats, including stowage and securing;

(xiv) Hazards of exposure and need for warm clothing;

(xv) Best use of survival craft for survival; and

(xvi) Methods of retrieving personnel, including use of helicopter-mounted rescue gear (slings, baskets, stretchers) and vessel's line-throwing apparatus.

(b) An abandon-ship drill must be held on each vessel in alternate weeks. If none can be held during the appointed week, because of bad weather or other unavoidable constraint, one must be held at the first opportunity afterward. If the crew changes more than once in any 2 weeks, one must be held as soon after the arrival of each crew as practicable.

(1) Any crew member excused from an abandon-ship drill must participate in the next one, so that each member participates in at least one each month. Unless more than 25 percent of the members have participated in one on that particular vessel in the previous month, one must be held before the vessel leaves port if reasonable and practicable; but, unless the Commandant (G-MOC) accepts alternative arrangements as at least equivalent, one must be held not later than 24 hours after the vessel leaves port in any event.

(2)(i) On a voyage likely to take more than 24 hours to complete, a muster of offshore workers must be held on departure. The master shall ensure that each worker is assigned to a survival craft and is directed to its location. Each person in charge of such a craft shall maintain a list of workers assigned to the craft.

(ii) On a voyage likely to take 24 hours or less to complete, the master shall call the attention of each offshore worker to the emergency instructions required by § 131.330.

(3) Each abandon-ship drill must include—

(i) Summoning of crew members and offshore workers to survival craft with the general alarm;

(ii) Simulation of an abandon-ship emergency that varies from drill to drill;

(iii) Reporting of crew members and offshore workers to survival craft, and preparing for, and demonstrating the duties assigned under the procedure described in the station bill for, the particular abandon-ship emergency being simulated;

(iv) Checking to see that crew members and offshore workers are suitably dressed;

(v) Checking to see that immersion suits and lifejackets are correctly donned;

(vi) Lowering of at least one lifeboat (far enough that the davit head has completed its travel and the fall wire of the lifeboat has begun to pay out) or, if no lifeboats are required, lowering of one rescue boat, after any necessary preparation for launching;

(vii) Starting and operating of the engine of the lifeboat or rescue boat; and

(viii) Operation of davits used for launching liferafts.

(4) As far as practicable, at successive drills different lifeboats must be lowered to meet the requirements of paragraph (b)(3)(vi) of this section.

(5) As far as practicable, each abandon-ship drill must be conducted as if there were an actual emergency.

(6) Each lifeboat must be launched with its assigned crew aboard during an abandon-ship drill, and be maneuvered in the water, at least once each 3 months that the vessel is operated.

(7) Each rescue boat must be launched with its assigned crew aboard and be maneuvered in the water—

(i) Once each month that the vessel is operated, if reasonable and practicable; but,

(ii) In any event, at least once each 3 months that the vessel is operated.

(8) If drills for launching lifeboats and rescue boats are carried out with the vessel making headway, the drills must, because of the danger involved, be practiced only in waters where the drills are safe, under the supervision of an officer experienced in such drills.

(9) At least one abandon-ship drill each 3 months must be held at night, unless the master determines it unsafe.

(10) Emergency lighting for mustering and abandonment must be tested at each abandon-ship drill.

(c) The master of each vessel carrying immersion suits shall ensure that—

(1) Each crew member either—

(i) Wears an immersion suit in at least one abandon-ship drill a month unless it is impracticable because of warm weather; or

(ii) Participates in at least one immersion-suit drill a month that includes donning an immersion suit and being instructed in its use;

(2) In each abandon-ship drill, each offshore worker aboard is instructed in the use of immersion suits; and

(3) Each offshore worker is told at the beginning of the voyage where immersion suits are stowed aboard and is encouraged to read the instructions for donning and using the suits.

(d) Each crew member aboard the vessel must be given training in the use of lifesaving appliances and in the duties assigned by the station bill.

(1) Except as provided by paragraph (d)(2) of this section, training aboard in the use of the vessel's lifesaving appliances, including equipment on survival craft, must be given to each crew member as soon as possible but not later than 2 weeks after the member joins the vessel.

(2) If a crew member is on a regularly scheduled rotating assignment to a vessel, training aboard in the use of the vessel's lifesaving appliances, including equipment on survival craft, must be given to the member not later than 2 weeks after the member first joins the vessel.

(3) Each crew member must be instructed in the use of the vessel's lifesaving equipment and appliances and in survival at sea during alternate weeks, normally in the weeks when abandon-ship drills are not held. If individual instructional sessions cover different parts of the vessel's lifesaving system, they must cover each part of the vessel's lifesaving equipment and appliances each 2 months. Each member must be instructed in at least—

(i) Operation and use of the vessel's inflatable liferafts;

(ii) Problems of hypothermia, first aid for hypothermia, and other appropriate procedures; and

(iii) Special procedures necessary for use of the vessel's lifesaving equipment and appliances in heavy weather.

(4) Training in the use of davit-launched inflatable liferafts must take place at intervals of not more than 4 months on each vessel with such liferafts. Whenever practicable this must include the inflation and lowering of a liferaft. If this liferaft is a special one intended for training only, and is not part of the vessel's lifesaving system, it must be conspicuously so marked.

(e) Dates when musters are held, details of abandon-ship drills, drills on other lifesaving equipment and appliances, and training aboard must be entered in the vessel's official logbook. Each logbook entry must include the following, as applicable:

- (1) Time and date.
- (2) Length of drill or training session.
- (3) Identification of survival craft used in drills.

- (4) Subject of training session.
- (5) Statement on the condition of the equipment used.

(6) Unless a full muster, drill, or training session is held at the appointed time, the circumstances and the extent of the muster, drill, or training session held.

#### § 131.535 Firefighting training and drills.

(a) A fire drill must be held on each vessel, normally on alternate weeks. It must not be held as part of the abandon-ship drill, nor immediately before or after the abandon-ship drill. If none can be held on schedule, because of bad weather or other unavoidable constraint, one must be held at the next opportunity.

(b) Any crew member excused from a fire drill must participate in the next one, so that each member participates in at least one each month. Unless more than 25 percent of the members have participated in one on that particular vessel in the previous month, one must be held before the vessel leaves port if reasonable and practicable; but, unless the Commandant (G-MOC) accepts alternative arrangements as at least equivalent, one must be held not later than 24 hours after the vessel leaves port in any event.

(c) Each fire drill must include—

(1) Summoning of crew members and offshore workers to their stations with the general alarm;

(2) Simulation of a fire emergency that varies from drill to drill;

(3) Reporting of crew members and offshore workers to stations, and preparing for, and demonstrating of the duties assigned under the procedure described in the station bill for, the particular fire emergency being simulated;

(4) Starting of fire pumps and use of a sufficient number of outlets to determine that the system is working properly;

(5) Bringing out each breathing apparatus and other item of rescue and safety equipment from the emergency-equipment lockers, and demonstrating of the use of each item by the person or persons that will make use of it;

(6) Operation of each watertight door;

(7) Operation of each self-closing fire door;

(8) Closing of each fire door and each door within the fire boundary; and

(9) Closing of each ventilation closure of each space protected by a fixed fire-extinguishing system.

(d) Each fire drill must, as far as practicable, be conducted as if there were an actual emergency.

(e) The dates when fire drills are held, and details of training in fire fighting and of fire drills, must be entered in the vessel's official logbook. Each logbook entry must include the following, as applicable:

- (1) Time and date.
- (2) Length of drill or training session.
- (3) Number and lengths of hose used.
- (4) Subject of training session.
- (5) Statement on the condition of the equipment used.

(6) Unless a full drill or training session is held at the appointed time, the circumstances and the extent of the drill or training session held.

#### § 131.540 Operational readiness.

(a) Except as provided by § 131.545(e) of this subpart, each lifesaving appliance and each item of equipment for a lifeboat, liferaft, survival craft, rescue boat, life float, or buoyant apparatus must be in good working order and ready for immediate use before the vessel leaves port and at any time when the vessel is away from port.

(b) Each deck where a lifeboat, liferaft, survival craft, rescue boat, life float, or buoyant apparatus is stowed, launched, or boarded must be kept clear of obstructions that would interfere with the breaking out, launching, or boarding of the lifesaving appliance.

#### § 131.545 Maintenance in general.

(a) For each lifesaving appliance, the manufacturer's instructions for maintenance of the appliances aboard must be aboard and must include the following:

(1) Checklists for use in the inspections required by § 131.565(a) of this subpart.

(2) Instructions for maintenance and repair.

(3) A schedule of periodic maintenance.

(4) A diagram of lubrication points with the recommended lubricants.

(5) A list of replaceable parts.

(6) A list of sources of spare parts.

(7) A log for records of inspections, maintenance, and repair.

(b) The master shall ensure that maintenance is carried out to comply with the instructions required by paragraph (a) of this section.

(c) For lifesaving appliances constructed on or before July 1, 1986, paragraph (a) of this section need be complied with only to the extent that appliances' manufacturers' instructions are available.

(d) The cognizant OCMI may accept, instead of the instructions required by

paragraph (a) of this section, a program for planned shipboard maintenance that includes the items listed in that paragraph.

(e) If lifeboats and rigid liferafts are maintained and repaired on the vessel while the vessel is under way, there must be enough lifeboats and liferafts available for use on the vessel to accommodate each person aboard the vessel.

(f) Except in an emergency, no extensive repairs or alterations may be made to any lifesaving appliance without advance notice to the cognizant OCMI. As far as possible, each repair or alteration must be made to comply with the requirements for the appliance in subchapter Q of this chapter. This OCMI may require each appliance that has been extensively repaired or in any way altered to undergo each pertinent test in subchapter Q of this chapter.

(g) The master shall report each emergency repair or alteration to a lifesaving appliance, as soon as practicable, either to the OCMI in the next port in the United States where the vessel calls or, if the vessel does not regularly call at ports in the United States, to the OCMI responsible for the next foreign port where the vessel calls.

(h) No lifeboat or rigid liferaft may be repaired or reconditioned for use on a vessel other than the one it was originally built for, unless specifically permitted by the cognizant OCMI. The lifeboat or rigid liferaft must be so repaired or reconditioned under the supervision of this OCMI, unless he or she specifically allows otherwise.

#### § 131.550 Maintenance of falls.

(a) Each fall used with a launching appliance must be turned end for end at intervals of not more than 30 months.

(b) Each fall used with a launching appliance must be renewed either when necessary because of deterioration or after the passage of not more than 5 years, whichever occurs earlier.

(c) Each fall used with a launching appliance must have a corrosion-resistant tag permanently marked with—

(1) The date the new fall was installed; and

(2) The last date, if any, the fall was turned end for end.

#### § 131.555 Spare parts and repair equipment.

Spare parts and repair equipment must be provided for each lifesaving appliance and component that either is subject to excessive wear or consumption or needs to be replaced regularly. These parts and equipment must be kept aboard the OSV, except

that, if the vessel operates daily out of the same shore base, they may be kept at that base.

**§ 131.560 Weekly tests and inspections.**

The following tests and inspections must be carried out weekly:

(a) Each lifesaving appliance and launching appliance must be visually inspected to ensure that it is ready for use.

(b) Each engine of a lifeboat or a rescue boat must be run ahead and astern for not less than 3 minutes, unless the ambient temperature is below the minimal temperature required for starting the engine.

(c) The general alarm system must be activated.

(d) Each battery for starting the engine of a lifeboat or a rescue boat, or for energizing a searchlight, a fixed installation of a radio in a lifeboat, or a portable radio, must be brought up to full charge at least once a week if the battery is—

(1) Of a type that requires recharging; and

(2) Not connected to a device that keeps it continuously charged.

(e) The transmitter of each fixed installation of a radio in a lifeboat and that of each portable radio must be tried out at least once a week with a dummy antenna load.

**§ 131.565 Monthly tests and inspections.**

(a) Each lifesaving appliance, including lifeboat equipment, must be inspected monthly against the checklist required by § 131.545(a)(1) of this subpart to ensure that it is aboard and in good order. A report of the inspection, including a statement on the condition of the appliance, must be entered in the vessel's logbook.

(b) Each Emergency Position Indicating Radio Beacon (EPIRB) and each Search and Rescue Transponder (SART), other than an EPIRB or SART in an inflatable liferaft, must be tested monthly. The EPIRB must be tested using the integrated test circuit and the output indicator (test button) to determine that it works.

**§ 131.570 Quarterly inspections.**

(a) Each apparatus that controls a lifeboat winch, including motor controllers, emergency switches, master switches, and limit switches, must be inspected once each 3 months.

(b) The inspection must involve the removal of drain plugs and the opening of drain valves to ensure that enclosures are free of water.

(c) The date of the inspection required by this section and the condition of the equipment must be entered in the vessel's logbook.

**§ 131.575 Yearly inspections and repair.**

(a) Each lifeboat, rescue boat, rigid liferaft, buoyant apparatus, and life float must be stripped, cleaned, and thoroughly inspected and repaired as needed at least once a year. This procedure includes emptying and cleaning each fuel tank and refilling it with fresh fuel.

(b) Each davit, winch, fall, and other launching-appliance must be thoroughly inspected at least once a year, and repaired as needed.

(c) Each item of survival equipment with an expiration date must be replaced during the annual inspection and repair if this date has passed.

(d) Each battery used in an item of survival equipment and clearly marked with an expiration date must be replaced during the annual inspection and repair if this date has passed.

(e) Except a storage battery used in a lifeboat or in a rescue boat, each battery used in an item of survival equipment and not clearly marked with an expiration date must be replaced during the annual inspection and repair.

(f) Compliance with the requirements of this section does not relieve the master or person in charge of the duty of compliance with requirements in § 131.540(a) of this subpart to keep the equipment ready for immediate use when the vessel is under way.

**§ 131.580 Servicing of inflatable liferafts, inflatable lifejackets, inflatable buoyant apparatus, and inflated rescue boats.**

(a) Except for an inflatable liferaft or an inflatable buoyant apparatus less than two years of age, each inflatable liferaft, inflatable lifejacket, inflatable buoyant apparatus, and hybrid inflatable lifejacket or work vest must be serviced within 12 months of—

(1) Its initial packing; and

(2) Each subsequent servicing, except when a servicing due after 12 months is delayed not more than 5 months until the next scheduled inspection of the OSV.

(b) Each inflatable liferaft and inflatable buoyant apparatus must be serviced—

(1) Whenever the container of the raft is damaged, or the straps or seal broken; and

(2) In compliance with subpart 160.151 of this chapter.

(c) Each inflatable lifejacket must be serviced in compliance with subpart 160.176 of this chapter.

(d) Each hybrid inflatable lifejacket or work vest must be serviced in accordance with the manual provided under § 160.077-29 of this chapter.

(e) Repair and maintenance of inflatable rescue boats must follow the

manufacturers' instructions. Each repair, except an emergency repair made aboard the vessel, must be made at a servicing facility approved by the Commandant (G-MSE).

**§ 131.585 Periodic servicing of hydrostatic-release units.**

(a) Except a disposable hydrostatic-release unit with an expiration date, each hydrostatic-release unit must be serviced—

(1) Within 12 months of its manufacture and within 12 months of each subsequent servicing, except when a servicing due after 12 months is delayed not more than 5 months until the next scheduled inspection of the vessel; and

(2) In compliance with subpart 160.062 of this chapter.

(b) The springs of each spring-tensioned gripe used with a hydrostatic-release unit must be renewed when the unit is serviced and tested.

**§ 131.590 Firefighting equipment.**

(a) The master shall ensure that the vessel's required firefighting equipment is on board in the prescribed location and always ready for use, other than when the equipment is being serviced.

(b) The master shall, at least once each 12 months, ensure the performance of the tests and inspections of each portable fire extinguisher, semiportable fire extinguisher, and fixed fire-extinguishing system aboard described by Table 132.350 of this subchapter.

(c) The master shall keep records of these tests and inspections, showing the dates of their performance, the number or other identification of each unit undergoing them, and the name of the person or company conducting them. The records must be made available to the marine inspector upon request and must be kept for the period of validity of the vessel's current Certificate of Inspection.

(d) The conducting of tests and inspections required by this section does not relieve the master of his or her responsibility to maintain the prescribed firefighting equipment in working order for use at any time when the vessel is under way.

**Subpart F—Logs**

**§ 131.610 Logbooks and records.**

(a) Each OSV must by statute, or by regulations in this subchapter, have certain logbooks or records. The master shall make all entries required by statute, or by regulations in this subchapter.

(b) 46 U.S.C. 11301 states that a vessel of the United States, except one on a voyage from a port in the United States

to a port in Canada, shall have an official logbook if the vessel is—

(1) On a voyage from a port in the United States to a foreign port; or

(2) Of at least 100 gross tons and on a voyage between a port in the United States on the Atlantic Ocean and one on the Pacific Ocean.

(c) The Coast Guard gratuitously furnishes to masters of vessels of the United States the official logbook as Form CG-706B or CG-706C, depending upon the number of persons employed as crew. The first several pages of this logbook list various acts of Congress governing logbooks and the entries required in them.

(d) When a voyage is completed, or after a specified time has elapsed, the master shall file the official logbook containing required entries with the OCMI at or nearest the port where the vessel may be.

(e) Unless an official logbook is required, the owner, operator, or master shall supply an alternative log or record for making entries required by law, including regulations in this subchapter. This log or record need not be filed with this OCMI, but must be kept available for review by a marine inspector for a year after the date that the latest entry concerns.

#### § 131.620 Matters that must be logged.

The following matters must be entered in each vessel's logbook:

(a) Safety Orientation for Offshore Workers. As held. See § 131.320.

(b) Tests and inspection of Steering Gear, Whistle, and Means of Communication. Before departure. See § 131.505.

(c) Draft and Loadline Markings. Before leaving port. Ocean and coastwise voyages only. See § 131.510.

(d) Verification of Compliance with Applicable Stability Requirements. See § 131.513.

(e) Periodic Sanitary Inspections. After periodic sanitary inspections made by the master. See § 131.515.

(f) Hatches and Other Openings. Each opening and closing, or departure from port without closing (except by vessels on protected waters). See § 131.520.

(g) Tests of Emergency Lighting and Power. Weekly, monthly, and twice-yearly. See § 131.525.

(h) Abandon-Ship Training and Drills, and Firefighting Training and Drills. As held. See §§ 131.530 and 131.535.

(i) Inspection of Lifeboat Winches. Once each 3 months. See § 131.570.

#### § 131.630 Entries in official logbooks.

On each vessel required to have an Official Logbook, the items required by 46 U.S.C. 11301, as well as the items

required by § 131.620, must be entered in the logbook.

### Subpart G—Work Vests

#### § 131.710 Approved work vests.

Each buoyant work vest carried aboard must be approved under subpart 160.053 of this chapter or, as a commercial hybrid personal flotation device, under subpart 160.077 of this chapter.

#### § 131.720 Use.

(a) An approved buoyant work vest is an item of safety apparel and may be carried aboard for wear by a crew member when working near or over the water.

(b) The vest may not count towards the vessel's complement of lifejackets.

(c) The vest may not be worn instead of a lifejacket during a drill.

#### § 131.730 Shipboard stowage.

The master shall ensure that no work vest is stowed where any lifejacket is stowed.

#### § 131.740 Shipboard inspections.

Each buoyant work vest must be subject to examination by a marine inspector, to determine its serviceability. If found serviceable, it may continue in service; but no buoyant work vest is stamped as inspected. If not found serviceable, and if determined irreparable by the inspector, a buoyant work vest must be destroyed in the presence of the inspector.

### Subpart H—Markings for Fire Equipment and Emergency Equipment

#### § 131.800 General.

(a) This section prescribes markings necessary for the guidance of persons aboard in case of an emergency. The markings may be modified or omitted if they are unnecessary, because either the vessel is small or particular circumstances warrant, and if the cognizant OCMI approves.

(b) Each stateroom notice, directional sign, and the like must be printed in English and in other languages appropriate to the service of the vessel.

(c) Where this subpart specifies red letters, letters of a contrasting color on a red background are acceptable.

#### § 131.805 General alarm bell, switch.

The switch in the pilothouse that activates the general alarm bell must be clearly and permanently identified either by letters on a metal plate or with a sign in red letters on a suitable background that state the following: "GENERAL ALARM."

#### § 131.810 General alarm bell.

Each general alarm bell must be identified by red letters at least 13 millimeters (1/2-inch) high that state the following: "GENERAL ALARM—WHEN BELL RINGS GO TO YOUR STATION."

#### § 131.815 Alarm for fixed gaseous fire-extinguishing system.

Each alarm for a fixed gaseous fire-extinguishing system must be conspicuously identified, using the following statement: "WHEN ALARM SOUNDS, LEAVE AT ONCE: [CARBON DIOXIDE] [HALON] BEING RELEASED."

#### § 131.820 Branch lines of fire-extinguishing system.

The valves of each branch line in the fire extinguishing system must be plainly and permanently marked, indicating the spaces served.

#### § 131.825 Controls of fire-extinguishing system.

Each control cabinet or space containing a valve or manifold for a fire extinguishing system must be distinctly marked in conspicuous red letters at least 50 millimeters (2 inches) high that state the following: "FIRE APPARATUS FOR [CARBON DIOXIDE] [HALON]".

#### § 131.830 Fire hose stations.

Each fire station must be identified in red letters and figures at least 50 millimeters (2 inches) high that state the following: "FIRE STATION #1," "\* \* \* 2," "\* \* \* 3," and so on. Where the hose is not so stowed in the open or behind glass as to be readily seen, this identification must be so placed as to be readily seen from a distance.

#### § 131.835 Portable fire extinguishers.

(a) Except as provided by paragraph (b) of this section, each portable fire extinguisher must be marked with a number, and the site of its stowage must be marked with a corresponding number at least 13 millimeters (1/2-inch) high.

(b) If only one type and size of portable fire extinguisher is carried, the number may be omitted.

#### § 131.840 Emergency lighting.

Emergency lighting must be marked with a letter "E" at least 13 millimeters (1/2-inch) high.

#### § 131.845 Instructions for shift of steering gear.

(a) Instructions, including diagrams, for a shift of steering gear and for a shift to the alternative steering stations must be on water-resistant material and posted at each steering station and in the steering-engine room, relating, in order, the different steps to take in either shift.

(b) The instructions must indicate each clutch or pin to be "in" or "out" and each valve or switch to be "open" or "closed" in a shift to any means of steering for which the vessel is equipped.

(c) The instructions must specify that each steering wheel or lever, and each rudder, must be amidships before any shift of steering gear or steering stations.

(d) Each clutch, gear, wheel, lever, valve, or switch used during any shift of steering gear or steering stations must be numbered or lettered on a metal plate or painted so that the numbers or letters are recognizable at a reasonable distance.

#### § 131.850 Rudder orders.

At each steering station there must be installed a suitable notice on the wheel or lever, or in some other place directly in the helmsman's line of sight, to indicate the direction in which to turn the wheel or lever for "right rudder" and for "left rudder."

#### § 131.855 Lifeboats and rescue boats.

(a) The following must be plainly marked or painted on each side of the bow of each lifeboat and rescue boat in block capital letters and numbers:

(1) The name of the vessel.

(2) The number of the boat. (The boats on each side of the vessel must be numbered from forward to aft. If there are boats on both sides of the vessel, the odd numbers must be on the starboard side.)

(3) For each vessel in ocean service, the name of the port whose marking on the stern is required by § 67.123 of this chapter.

(b) The following must be plainly marked or painted on each side of the bow of each lifeboat and rescue boat in block capital letters and numbers:

(1) The length and beam of the boat.

(2) The number of persons the boat will hold. This number must—

(i) Be the number of persons the boat is equipped for; and

(ii) Not be greater than the number of persons the boat is approved for, as shown on its nameplate.

(c) The following must be plainly marked or painted on each lifeboat and rescue boat, visible from above the boat:

(1) The number of the boat.

(2) The name of the vessel.

(d) Each lifeboat and rescue boat must be marked with Type II retro-reflective material approved under subpart 164.018 of this chapter. The arrangement of the retro-reflective material must comply with IMO Resolution A.658(16).

#### § 131.860 Rigid liferafts.

(a) The following must be plainly marked or painted, near one entrance of each rigid liferaft:

(1) The name of the vessel.

(2) For each vessel in ocean service, the name of the port whose marking on the stern is required by § 67.123 of this chapter.

(b) The length of the painter must be plainly marked or painted, near one entrance of each rigid liferaft.

(c) The number of persons the rigid liferaft is approved for must be plainly marked or painted, over each entrance to each raft, in letters and numbers at least 102 millimeters (4 inches) high and in a color contrasting to that of the raft. This number must—

(1) Be the number of persons the rigid liferaft is equipped for; and

(2) Not be greater than the number of persons the rigid liferaft is approved for, as shown on its nameplate.

(d) The rigid liferaft must be marked with the words "SOLAS A pack" or "SOLAS B pack", to reflect the pack inside.

#### § 131.865 Inflatable liferafts and inflatable buoyant apparatus.

The number of the inflatable liferaft or inflatable buoyant apparatus and the number of persons it is approved for must be marked or painted, in a conspicuous place in the immediate vicinity of each raft and each apparatus, in letters and numbers at least 38 millimeters (1½ inches) high and in a color contrasting to that of the raft or apparatus. Each raft or apparatus stowed on the side of a vessel must be numbered like a liferaft in compliance with § 199.178 (c) and (d) of this chapter. No letters or numbers may go on the liferaft or on the container of the apparatus.

#### § 131.870 Life floats and buoyant apparatus.

(a) The name of the vessel must be plainly marked or painted on each life float or buoyant apparatus, and on each oar and paddle.

(b) The number of persons each life float or buoyant apparatus is approved for must be plainly marked or painted on each float or apparatus in letters and numbers at least 38 millimeters (1½ inches) high and in a color contrasting to that of the float or apparatus. This number must—

(1) Be the number of persons the float or apparatus is equipped for; and

(2) Not be greater than the number of persons the float or apparatus is approved for, as shown on its nameplate.

#### § 131.875 Lifejackets, immersion suits, and ring buoys.

(a) Each lifejacket, immersion suit, and ring life buoy must be marked in block capital letters with the vessel's name.

(b) Each container for lifejackets and immersion suits must be marked in letters and numbers at least 50 millimeters (2 inches) high with the number, identity, or IMO symbol specified by IMO Resolution A.760(18), and size of the items stowed inside.

(c) Each ring buoy on a vessel in ocean service must be marked in block capital letters with the name of the port whose marking on the stern of the vessel is required by § 67.123 of this chapter.

(d) Each stowage site for a ring buoy must be marked "LIFE BUOY" or marked with the IMO symbol.

(e) Each lifejacket must be marked with Type I retro-reflective material approved under subpart 164.018 of this chapter. The arrangement of the retro-reflective material must comply with IMO Resolution A.658(16).

(f) Each ring life buoy must be marked with Type I or II retro-reflective material approved under subpart 164.018 of this chapter. The arrangement of the retro-reflective material must comply with IMO Resolution A.658(16).

#### § 131.880 Fire hoses and axes.

Each fire hose and axe must be marked with the vessel's name.

#### § 131.890 EPIRBs and SARTs.

The name of the vessel must be plainly marked or painted on each Emergency Position Indicating Radio Beacon (EPIRB) and on each Search and Rescue Transponder (SART), except on an EPIRB or SART—

(a) In an inflatable liferaft; or

(b) Permanently installed in a survival craft.

#### § 131.893 Watertight doors and watertight hatches.

Each watertight door in a bulkhead that must be watertight in compliance with the requirements in part 174 of this chapter, and each watertight hatch, must be marked on both sides in letters at least 50 millimeters (2 inches) high that state the following: "WATERTIGHT DOOR—KEEP CLOSED EXCEPT FOR PASSAGE" or "WATERTIGHT HATCH—KEEP CLOSED WHEN NOT IN USE".

#### § 131.896 Remote stopping-systems.

The remote stopping-systems required by § 129.540 of this subchapter must be clearly marked to show what system each controls.



**§ 131.899 Fire dampers.**

Each fire damper installed within the boundary of a space protected by a fixed fire extinguishing system must be fitted with an indicator showing whether the damper is open or closed and must be marked with red letters at least 13 millimeters (1/2-inch) high stating "FIRE DAMPER" and, as otherwise appropriate, identifying the space served by the fire damper.

**Subpart I—Miscellaneous****§ 131.905 Statutory penalties.**

(a) The marine-safety statutes and other statutes impose criminal and civil penalties for violating the applicable provisions of this subchapter. Possible sanctions include:

(1) Assessment and collection of civil monetary penalty.

(2) Criminal prosecution, where no loss of life results.

(3) Criminal prosecution for manslaughter, where loss of life results from violating marine-safety statutes or regulations or from misconduct, negligence, or inattention to duty.

(4) Libel against vessel.

(b) 46 U.S.C. Chapter 77 allows, in addition to the foregoing, the suspension or revocation of licenses, certificates, or documents issued by the Coast Guard, for incompetence, misconduct, or negligence or for violating marine-safety statutes or regulations.

**§ 131.910 Notices to mariners and aids to navigation.**

Each master and mate shall acquaint himself or herself with the latest information published by the Coast Guard and the U.S. Navy regarding aids to navigation in the area in which the vessel operates.

**§ 131.915 Persons allowed in pilothouse and on navigational bridge.**

No person may be in the pilothouse while the vessel is under way, unless connected with the navigation of the vessel or authorized for good cause by the master or mate on watch.

**§ 131.920 Level of manning.**

Each vessel must carry the personnel required by the Certificate of Inspection, as determined by the cognizant OCMI, based on an evaluation under part 15 of this chapter.

**§ 131.925 Compliance with provisions of Certificate of Inspection.**

The master of the vessel shall ensure compliance with each provision of the Certificate of Inspection. Nothing in this subchapter prevents the master's diverting the vessel from the route

prescribed in the Certificate, or taking other steps necessary and prudent to assist vessels in distress or to handle similar emergencies.

**§ 131.930 Display of stability letter.**

If the Coast Guard issues a stability letter under § 170.120 of this chapter, the letter must be readily available to the person on watch in the pilothouse of the vessel.

**§ 131.935 Prevention of oil pollution.**

Each vessel must be operated in compliance with—

(a) Section 311 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1321); and

(b) 33 CFR parts 151, 155, and 156.

**§ 131.940 Marine sanitation device.**

Each vessel with installed toilet facilities must have a marine sanitation device in compliance with 33 CFR part 159.

**§ 131.945 Display of plans.**

Each vessel must have a permanently exhibited, for the guidance of the master and crew members, general arrangement plans showing, for each deck, the various fire-retardant bulkheads together with particulars of the—

(a) Fire-detection systems;

(b) Manual-alarm systems;

(c) Fire-extinguishing systems;

(d) Fire doors;

(e) Means of ingress to the different compartments; and

(f) Ventilating-systems, including the—

(1) Positions of the dampers;

(2) Site of the remote means of

stopping the fans; and

(3) Identification of the fans serving each section.

**§ 131.950 Placard on lifesaving signals and helicopter recovery.**

(a) Each vessel must have readily available to the person on watch in the pilothouse a placard (Form CG-811) containing instructions—

(1) For the use of lifesaving signals set forth in Regulation 16, Chapter V, of SOLAS 74/83; and

(2) In helicopter recovery.

(b) The signals must be employed by vessels or persons in

distress when communicating with lifesaving stations and maritime rescue units.

**§ 131.955 Display of license.**

Each master and licensed officer on an vessel shall conspicuously display his or her license in compliance with 46 U.S.C. 7110.

**§ 131.960 Use of auto-pilot.**

When the automatic pilot is used in areas of high traffic density, conditions of restricted visibility, or any other hazardous navigational situations, the master shall ensure that—

(a) It is possible to immediately establish manual control of the vessel's steering;

(b) A competent person is ready at all times to take over steering control; and

(c) The changeover from automatic to manual control of the vessel's steering and the reverse is made by, or under the supervision of, the master or officer of the watch.

**§ 131.965 Sounding of whistle.**

No vessel may sound its whistle within any harbor limits of the United States unless it needs to.

**§ 131.970 Unauthorized lighting.**

No master of a vessel may authorize or permit the vessel's carrying of any lighting not required by law that will interfere in any way with any other vessel's ability to distinguish the vessel's navigation lighting.

**§ 131.975 Searchlights.**

No person may flash, or cause to be flashed, the rays of a searchlight or other blinding light onto the bridge or into the pilothouse of any vessel, OSV or other, under way.

**§ 131.980 Lookouts and watches.**

Nothing in this part exonerates any master or officer of the watch from the consequences of any neglect to keep a proper lookout or to maintain a proper fire watch, or of any neglect of any precaution that may be required by the ordinary practice of seamen, by general prudence, or by the special circumstances of the case. Each master shall set added watches when necessary to guard against fire or other danger and to give an alarm in case of accident or disaster.

**PART 132—FIRE-PROTECTION EQUIPMENT****Subpart A—Fire Main**

Sec.

132.100 General.

132.110 Piping.

132.120 Fire pumps.

132.130 Fire stations.

**Subpart B—Portable and Semiportable Fire Extinguishers**

132.210 Classification.

132.220 Installation.

132.230 Spare charges.

132.240 Stowage of semiportable fire extinguishers.

**Subpart C—Miscellaneous**

- 132.310 Fixed fire-extinguishing systems for paint lockers.  
 132.320 Helicopter-landing decks.  
 132.330 Fire monitors.  
 132.340 Equipment installed although not required.  
 132.350 Tests and inspections of fire-extinguishing equipment.  
 132.360 Fire axes.  
 132.370 Added requirements for fixed independent and portable tanks.

**Authority:** 46 U.S.C. 3306; 49 CFR 1.46.

**Subpart A—Fire Main****§ 132.100 General.**

(a) Except as provided by paragraphs (b) and (c) of this section, each vessel must be equipped with a fire main that complies with this subpart.

(b) Each vessel of less than 100 gross tons and not more than 19.8 meters (65 feet) in length may have, instead of a fire main that complies with this subpart, a hand-operated pump and a hose capable of providing an effective stream of water to each part of the vessel.

(c) A garden hose of nominal inside diameter of at least 16 millimeters (5/8-inch) complies with paragraph (b) of this section if the hose is—

(1) Of good commercial grade and is constructed of an inner rubber tube, plies of braided-fabric reinforcement, and an outer cover made of rubber or equivalent fire-resistant material; and

(2) Fitted with a commercial garden-hose nozzle of high-grade bronze or equivalent metal capable of providing a solid stream and a spray pattern.

**§ 132.110 Piping.**

(a) Except as provided for liftboats by § 134.180 of this subchapter, each fitting, flange, valve, and run of piping must meet the applicable requirements of part 128 of this subchapter. Piping must be—

(1) Hot-dip galvanized;

(2) At least extra-heavy schedule; or

(3) Of a suitable corrosion-resistant material.

(b) Each distribution cut-off valve must be marked in compliance with § 131.820 of this subchapter.

**§ 132.120 Fire pumps.**

(a) Except as provided by § 132.100(b) of this subpart, each vessel must be equipped with one self-priming power-driven fire pump capable of delivering a single stream of water from the highest hydrant, through the hose and nozzle at a Pitot-tube pressure of at least 345 kPa (50 psi [pounds per square inch]).

(b) Each fire pump must be fitted on the discharge side with a pressure gauge.

(c) Each fire pump must be fitted on the discharge side with a relief valve set to relieve at either 172 kPa (25 psi) in excess of the pressure necessary to maintain the requirements of paragraph (a) of this section or 862 kPa (125 psi), whichever is greater. The relief valve is optional if the pump is not capable of developing pressure exceeding the greater amount.

(d) If two propulsion engines are installed, the pump required by paragraph (a) of this section may be driven by one of the engines. If only one propulsion engine is installed, the pump must be driven by a source of power independent of the engine.

(e) If two fire pumps are installed, and if one pump remains available for service on the fire main at any time, the other pump may be used for other purposes.

(f) Each fire pump must be capable of providing the quantity of water required to comply with paragraph (a) of this section while meeting any other demands placed on it, as by a branch line connected to the fire main for washing the anchor or the deck.

(g) No branch line may be directly connected to the fire main except for fighting fires or for washing the anchor or the deck. Each discharge line for any other purpose must be clearly marked and must lead from a discharge manifold near the fire pump.

(h) When a fire monitor is connected to the fire main system, it must lead from a discharge manifold near the fire pump.

(i) The total cross-sectional area of piping leading from a fire pump may not be less than that of the pump-discharge outlet.

(j) In no case may a pump connected to a line for flammable or combustible liquid be used as a fire pump.

(k) A fire pump must be capable of both manual operation at the pump and, if a remote operating station is fitted, operation at that station.

**§ 132.130 Fire stations.**

(a) Except as provided by paragraph (b) of this section, fire stations must be so numerous and so placed that each part of the vessel accessible to persons aboard while the vessel is being operated, and each cargo hold, are reachable by at least two effective spray patterns of water. At least two such patterns must come from separate hydrants. At least one must come from a single length of hose.

(b) Each part of the main machinery space, including the shaft alley if it contains space assigned for the stowage of combustibles, must be reachable by at least two streams of water. Each stream

must come from a single length of hose, from a separate fire station.

(c) Each fire station must be numbered in compliance with § 131.830 of this subchapter.

(d) Each part of the fire main on a weather deck must be either protected against freezing or fitted with cut-out valves and drain valves so that exposed parts of the piping may be shut off and drained in freezing weather. Except when closed against freezing, the cut-out valves must be sealed open.

(e) Each outlet at a fire hydrant must be at least 38 millimeters (1½ inch) in diameter and, to minimize the possibility of kinking, must be fitted so that no hose leads upward from it.

(f) Each fire station must be equipped with a spanner suitable for use on the hose there.

(g) Each fire station must have at least one length of fire hose. Each hose on the station must have a fire nozzle approved under subpart 162.027 of this chapter that can discharge both solid stream and water spray.

(h) Each pipe and fire hydrant must be placed so that the fire hose may be easily coupled to them. Each station must be readily accessible. No deck cargo may interfere with access to the stations; each pipe must run as far away from this cargo as practicable, to avoid risk of damage by the cargo.

(i) Each fire hydrant or "Y" branch must be equipped with a valve such that the fire hose may be removed while there is pressure on the fire main.

(j) Each fire hydrant connection must be of brass, bronze, or equivalent metal. The threads of fire hose couplings must be of brass or other suitable corrosion-resistant material and comply with NFPA 1963.

(k) Each fire hydrant must have a fire hose 15.2 meters (50 feet) in length, with a minimum diameter of 38 millimeters (1½ inches), connected to an outlet, for use at any time.

(l) No fire hose, when part of the fire equipment, may be used for any purpose except fire-fighting, fire drills, and testing.

(m) A suitable hose rack or other device must be provided for each fire hose. Each rack on a weather deck must be placed so as to protect its hose from heavy weather.

(n) Each section of fire hose must be lined commercial fire hose, or lined fire hose that meets Standard 19 of Underwriters Laboratories, Inc. (UL). Hose that bears the UL label as lined fire hose complies with this section.

**Subpart B—Portable and Semiportable Fire Extinguishers**

**§ 132.210 Classification.**

(a) Each portable fire extinguisher and semiportable fire extinguisher is classified by a symbol combining letter and number. The letter indicates the type of fire that the unit should extinguish; the number indicates the relative size of the unit.

(b) The types of fire are the following:

- (1) "A"—fires in ordinary combustible materials, where the quenching and cooling effect of quantities of either water or solutions containing large percentages of water is essential.
- (2) "B"—fires in flammable liquids, greases, and the like, where the blanketing effect of a smothering-agent is essential.
- (3) "C"—fires in electrical equipment, where the use of nonconducting extinguishing-agent is essential.

(c) The sizes of units run from "I" for the smallest to "V" for the largest. Sizes I and II are portable fire extinguishers; sizes III, IV, and V, which exceed 25 kilograms (55 pounds) in gross weight, are semiportable fire extinguishers and must be fitted with suitable hose and nozzle or other practicable means to cover any part of the space involved. Typical portable and semiportable fire extinguishers are set forth by Table 132.210 of this section.

TABLE 132.210

Classification		Halon 1211, 1301, and 1211-1301 mixtures kgs. (lbs.)	Foam, liters (gallons)	Carbon dioxide, kgs. (lbs.)	Dry chemicals, kgs. (lbs.)
Type	Size				
A	II	.....	9.46 (2½) .....	.....	.....
B	I	1.13 (2½) .....	.....	1.8 (4) .....	0.91 (2)
B	II	4.5 (10) .....	9.46 (2½) .....	6.8 (15) .....	4.5 (10)
B	III	.....	45.4 (12) .....	15.9 (35) .....	9 (20)
B	IV	.....	75.7 (20) .....	22.6 (50) .....	13.6 (30)
B	V	.....	151.4 (40) .....	453 (100) .....	22.6 (50)
C	I	1.13 (2½) .....	.....	1.8 (4) .....	.91 (2)
C	II	4.5 (10) .....	.....	6.8 (15) .....	4.5 (10)

(d) Each portable fire extinguisher and semiportable fire extinguisher must have permanently attached an identification plate that gives the name of the extinguishing-agent, the capacity of the agent in liters (gallons) or kilograms (pounds), the classification of the extinguisher expressed by letter or

letters indicating the type or types of fire for which it is intended, and the identifying mark of the manufacturer.

**§ 132.220 Installation.**

(a) Each portable fire extinguisher approved under subpart 162.028 of this chapter and each semiportable fire

extinguisher approved under subpart 162.039 of this chapter must be installed in compliance with Table 132.220 of this section. The placement of each extinguisher must satisfy the cognizant OCMI, who may also deem added extinguishers necessary for the proper protection of the vessel.

TABLE 132.220.—CARRIAGE OF PORTABLE AND SEMIPORTABLE FIRE EXTINGUISHERS

Space	Classification (see § 132.210)	Number and placement
Safety areas: Communicating passageways	A-II .....	1. In each main passageway, not more than 45.7 meters (150 feet) apart (permissible in stairways).
Pilothouse .....	C-I .....	2. In vicinity of exit.
Service spaces: Galleys .....	B-II or C-11 .....	1. For each 230 square meters (2,500 feet <sup>2</sup> ) or fraction thereof, suitable for hazards involved.
Paint lockers .....	B-II .....	1. Outside space, in vicinity of exit.
Accessible baggage and storerooms .....	A-II .....	1. For each 230 square meters (2,500 feet <sup>2</sup> ) or fraction thereof, located in vicinity of exits, either inside or outside spaces.
Work shops and similar spaces .....	A-II .....	1. Outside space in vicinity of exit.
Machinery spaces: Internal-combustion propulsion-machinery.	B-II .....	1. For each 1,000 brake horsepower, but not fewer than 2 nor more than 6.
Electric propulsion motors or generators of open type.	B-III .....	1. Required. (1), (2)
Auxiliary spaces: Internal combustion .....	C-II .....	1. For each propulsion motor or generator unit.
Electric motors and emergency generators ....	B-II .....	1. Outside space in vicinity of exit. (2)
	C-II .....	1. Outside space in vicinity of exit. (2)

(1) Not required where a fixed gaseous fire-extinguishing system is installed.  
 (2) Not required on vessels of less than 300 gross tons.

(b) Each semiportable fire extinguisher must be mounted or otherwise placed in the open so as to be readily visible.

(c) Except as provided by paragraph (d) of this section, each portable fire extinguisher must be mounted or

otherwise placed in the open or behind glass so as to be readily visible.

(d) A portable fire extinguisher may be mounted or otherwise placed in an enclosure together with the fire hose, if the enclosure is marked in compliance with § 131.830 of this subchapter.

(e) Each portable fire extinguisher and its station must be numbered to comply with § 131.835 of this subchapter.

(f) No portable or semiportable fire extinguisher with a nameplate indicating that it needs protection from freezing may be mounted or otherwise

placed where freezing temperatures are foreseeable.

**§ 132.230 Spare charges.**

(a) Except as provided by paragraph (b) or (c) of this section, each vessel must carry spare charges for 50 percent of the portable fire extinguishers required by § 132.220 of this subpart.

(b) Rather than comply with paragraph (a) of this section, a vessel may carry one extra portable extinguisher of the same classification.

(c) If extinguishers of a particular classification cannot be readily recharged by crew members, a vessel must—rather than comply with paragraph (a) of this section—carry one more extinguisher of that classification.

(d) Each spare charge must be packaged so as to minimize the hazards to personnel recharging the extinguishers.

**§ 132.240 Stowage of semiportable fire extinguishers.**

The frame or support of each semiportable fire extinguisher of size III, IV, or V must be secured to prevent the extinguisher from shifting in heavy weather.

**Subpart C—Miscellaneous**

**§ 132.310 Fixed fire-extinguishing systems for paint lockers.**

(a) Except as provided by paragraph (b) of this section, a fixed gaseous fire-extinguishing system or another approved fixed fire-extinguishing system must be installed in each paint locker.

(b) No fixed fire-extinguishing system need be installed in a paint locker that is—

(1) Less than 1.7 cubic meters (60 cubic feet) in volume;

(2) Accessible only from the weather deck; and

(3) Not adjacent to a tank for flammable or combustible liquid.

(c) Each fixed fire-extinguishing system installed must comply with part 95 of this chapter or be approved by the Commanding Officer, Marine Safety Center.

**§ 132.320 Helicopter-landing decks.**

Each vessel with a helicopter-landing deck must meet the fire fighting requirements of part 108 of this chapter.

**§ 132.330 Fire monitors.**

(a) Each fire monitor of the fire main system must be fitted with a shut-off valve at the monitor and at the connection to the fire main discharge manifold required by § 132.120(h) of this part.

(b) Fire monitor piping must comply with § 132.110 of this part.

(c) Each fire monitor must be protected against over-pressure.

**§ 132.340 Equipment installed although not required.**

A vessel may install equipment for detection of and protection against fires beyond that required by this subchapter, unless the excess equipment in any way endangers the vessel or the persons aboard. This equipment must be listed and labeled by a nationally recognized testing laboratory.

**§ 132.350 Tests and inspections of fire-extinguishing equipment.**

(a) Each master of a vessel shall ensure that the tests and inspections, of fire-extinguishing equipment, described by paragraph (b) of this section are performed—

(1) Every 12 months; or

(2) Not later than the next inspection for certification, unless the total time from the date of the last tests and inspections exceeds 15 months.

(b) The master shall provide satisfactory evidence of the servicing of

fire-extinguishing equipment, required by paragraph (c) of this section, to the marine inspector. If any of the equipment or records have not been properly maintained, a qualified servicing facility may be required to perform the required inspections, maintenance, and hydrostatic tests.

(c) The following tests and inspections of fire-extinguishing equipment must be performed by the owner, operator, or master, or by a qualified servicing facility, to verify compliance with paragraph (a) of this section:

(1) Each portable fire extinguisher must be inspected, maintained, and hydrostatically tested as required by Chapter 4 of NFPA 10 with the frequency specified by NFPA 10. Carbon-dioxide and halon portable fire extinguishers must be refilled when the weight loss of net content exceeds that specified for fixed systems by Table 132.350. Further, each must be examined for excessive corrosion and for general condition. A tag issued by a qualified servicing facility, and attached to each extinguisher, will be acceptable evidence that the necessary maintenance has been conducted.

(2) Each semiportable fire extinguisher and each fixed fire-extinguishing system must be—

(i) Inspected and tested as required by Table 132.350 of this subpart;

(ii) Inspected, tested, and marked as required by §§ 147.60 and 147.65 of this chapter;

(iii) Inspected to ensure that piping, controls, and valves are in good general condition with no excessive corrosion; and

(iv) Inspected and tested to determine that alarms and ventilation shutdowns for each fire-extinguishing system operate properly.

TABLE 132.350.—TESTS OF SEMI-PORTABLE AND FIXED FIRE-EXTINGUISHING SYSTEMS

Type of system	Test
Carbon dioxide .....	Weigh cylinders. Recharge if weight loss exceeds 10% of weight of charge. Test time delays, alarms, and ventilation shutdowns with carbon dioxide, nitrogen, or other nonflammable gas as stated in the manufacturer's instruction manual. Inspect hoses and nozzles to be sure they are clean.
Halon .....	Weigh cylinders. Recharge if weight loss exceeds 5% of weight of charge. If the system has a pressure gauge, also recharge if pressure loss (adjusted for temperature) exceeds 10%. Test time delays, alarms, and ventilation shutdowns with carbon dioxide, nitrogen, or other nonflammable gas as stated in the manufacturer's instruction manual. Inspect hoses and nozzles to be sure they are clean.
Dry chemical (cartridge-operated)	Examine pressure cartridge and replace if end is punctured or if cartridge has leaked or is in unsuitable condition. Inspect hose and nozzle to see that they are clear. Insert charged cartridge. Ensure that dry chemical is free-flowing (not caked) and that extinguisher contains full charge.
Dry chemical (stored pressure) ...	See that pressure gauge is in operating range. If not, or if seal is broken, weigh or otherwise determine that extinguisher is fully charged with dry chemical. Recharge if pressure is low or if dry chemical is needed.
Foam (stored pressure) .....	See that pressure gauge, if there is one, is in operating range. If it is not, or if seal is broken, weigh or otherwise determine that extinguisher is fully charged with foam. Recharge if pressure is low or if foam is needed. Replace premixed agent every 3 years.

(3) The fire-main system must be operated, and the pressure checked at the remotest and highest outlets. Each fire hose must be subjected to a test pressure, equivalent either to the maximal pressure to which it may be subjected in service or to 690 kPa (100 psi), whichever is greater.

(4) All systems for detecting smoke and fire, including sensors and alarms, must be inspected and tested.

**§ 132.360 Fire axes.**

(a) Each vessel of less than 100 gross tons must carry one fire axe.

(b) Each vessel of 100 or more gross tons must carry two fire axes.

(c) Each fire axe must be so placed as to be readily available in an emergency.

(d) Each fire axe must be so placed in the open or behind glass that it is readily visible, except that, if the enclosure is marked in compliance with § 131.830 of this subchapter, the axe may be placed in an enclosure together with the fire hose.

**§ 132.370 Added requirements for fixed independent and portable tanks.**

(a) When carrying fixed independent tanks on deck or portable tanks in compliance with § 125.110 of this subchapter, each vessel must also comply with §§ 98.30–37 and 98.30–39 of this chapter.

(b) When carrying portable tanks in compliance with § 125.120 of this subchapter, each vessel must also comply with 49 CFR 176.315.

**PART 134—ADDED PROVISIONS FOR LIFTBOATS**

Sec.

134.100	Applicability.
134.110	Initial inspection.
134.120	Inspection for certification.
134.130	New construction.
134.140	Structural standards.
134.150	Liftboat-jacking systems.
134.160	Freeboard markings.
134.170	Operating manual.
134.180	Piping for fire-main suction.

**Authority:** 46 U.S.C. 3306; 49 CFR 1.46.

**§ 134.100 Applicability.**

This part, as well as parts 125 through 133 of this subchapter, applies to each liftboat of United States flag to which this subchapter applies.

**§ 134.110 Initial inspection.**

Liftboat jacking systems, liftboat legs, liftboat leg pads, and arrangements for supply of water to fire mains, as well as the items listed by § 126.340 of this subchapter, will normally be inspected during the initial inspection to determine whether the liftboat was built in compliance with developed plans and meets applicable regulations.

**§ 134.120 Inspection for certification.**

Liftboat jacking systems, liftboat legs, liftboat leg pads, and arrangements for supply of water to fire mains, as well as the items listed by § 126.430 of this subchapter, will normally be inspected during an inspection for certification to determine whether the liftboat is in satisfactory condition and fit for the service intended.

**§ 134.130 New construction.**

Each applicant for an original Certificate of Inspection and for approval of plans must submit, as well as three copies of those required by § 127.110 of this subchapter, three copies of the following plans:

(a) Operating Manual for Liftboats.

(b) Legs, details of supporting structure, and structural calculations.

**§ 134.140 Structural standards.**

(a) Except as provided by paragraph (b) of this section, each liftboat must comply with the ABS's "Rules for Building and Classing Mobile Offshore Drilling Units", assuming a steady wind speed of 100 knots for liftboats in unrestricted service, and 70 knots for liftboats in restricted service under normal operating conditions and 100 knots under severe storm conditions, as follows:

(1) The main hull structure, legs, and supporting structure must comply with Section 3/4.3 of the Rules.

(2) The calculations required by Section 3/4.3 of the Rules must assume the vessel to be in the most adverse loading conditions described by Sections 3/2.1 and 3/4.1 of the Rules.

(3) Unless otherwise agreed upon by the Commandant (G–MSE), the calculations on column-buckling required by Section 3/4.3 of the Rules, must employ an effective-length factor, "K", of not less than 2.0.

(4) The calculations on single-rack jacking systems required by Sections 3/2.1 and 3/4.1 of the Rules must include an extra bending moment caused by the most adverse eccentric loading of the legs.

(b) Standards of classification societies other than the ABS, and other established standards acceptable to the Commandant (G–MSE), may be used.

(c) Upon submittal of the plans required by §§ 127.110 and 133.130 of this subchapter, the standard used in the design must be specified.

(d) If no established standard is used in the design, tailed design calculations must be submitted with the plans required by §§ 127.110 and 133.130 of this subchapter.

**§ 134.150 Liftboat-jacking systems.**

(a) For this subchapter, liftboat jacking systems are vital systems and must comply with Sections 4/1.13.1 through 4/1.13.3 of the ABS's "Rules for Building and Classing Mobile Offshore Drilling Units" as well as meet the applicable requirements of part 128 of this subchapter.

(b) Each control system for a liftboat jacking system must be designed so that loss of power, loss of pressure in the hydraulic system, or low hydraulic-fluid level will activate a visible and audible alarm at the operating station and will not result in the liftboat's uncontrolled descent.

**§ 134.160 Freeboard markings.**

Freeboard markings required by § 174.260 of this subchapter must be both permanently scribed or embossed and painted white or yellow on a dark background.

**§ 134.170 Operating manual.**

(a) Each liftboat must have aboard an operating manual approved by the Coast Guard as complying with this section.

(b) The operating manual must be available to, and written so as to be easily understood by, the crew members of the liftboat and must include the following:

(1) A table of contents and general index.

(2) A general description of the vessel, including—

- (i) Major dimensions;
- (ii) Tonnages; and
- (iii) Load capacities for—
  - (A) Various cargoes;
  - (B) Crane hook; and
  - (C) Helicopter-landing deck.

(3) Designed limits for each mode of operation, including—

- (i) Draft;
- (ii) Air gap;
- (iii) Wave height;
- (iv) Wave period;
- (v) Wind;
- (vi) Current;
- (vii) Temperatures; and
- (viii) Other environmental factors.

(4) The heaviest loads allowable on deck.

(5) Information on the use of any special cross-flooding fittings and on the location of valves that may require closure to prevent progressive flooding.

(6) Guidance on preparing the vessel for heavy weather and on what to do when heavy weather is forecast, including when critical decisions or acts—such as leaving the area and heading for a harbor of safe refuge, or evacuating the vessel—should be accomplished.

(7) Guidance on operating the vessel while changing mode and while

preparing the vessel to make a move, and information on how to avoid structural damage from shifting loads during heavy weather.

(8) Information on inherent operational limitations for each mode and on changing modes, including preloading instructions.

(9) Guidance on the proper procedures for discovering the flooding of a normally buoyant leg or leg pad, precautionary information concerning the effects on stability of flooded legs, and what to do upon discovering the flooding of a normally buoyant leg or leg pad.

(10) A description, a diagram, operating guidance for the bilge system, and an alternative method of dewatering.

(11) A general arrangement diagram showing the locations of—

(i) Watertight and weathertight compartments;

(ii) Openings in the hull and structure;

(iii) Vents and closures;

(iv) Shutdowns for mechanical and electrical emergencies, and for emergencies affecting ventilation;

(v) Alarms for flooding and for too-high and too-low levels;

(vi) Fire and gas detectors; and

(vii) Access to different compartments and decks.

(12) A list of shutdown locations for emergencies and guidance on restarting mechanical and electrical equipment and equipment for ventilation after shutdowns.

(13) A diagram of the hazardous locations (if applicable).

(14) A diagram of the emergency-power system.

(15) Stability information setting forth the maximum allowable height of the center of gravity in relation to draft data, displacement, and other applicable parameters unique to the design of the unit to determine compliance with the intact and damage stability criteria, under §§ 174.250 and 174.255 of this chapter.

(16) Curves of form as required under § 170.075(a)(3) of this chapter.

**§ 134.180 Piping for fire-main suction.**

(a) Except as provided by paragraph (b) of this section, suction lines must comply with § 132.110 of this subchapter.

(b) Suction lines that extend below the main deck outside the hull plating and that supply the fire pump with the liftboat in the elevated mode must be metallic, unless they comply with § 56.60–25(c) of this chapter for vital fresh-water and salt-water service, except that they may be of unlimited length.

**PART 170—STABILITY REQUIREMENTS FOR ALL INSPECTED VESSELS**

8. The authority citation for part 170 continues to read as follows:

**Authority:** 43 U.S.C. 1333; 46 U.S.C. 2103, 3306, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

9. In § 170.055, revise paragraph (g) to read as follows:

**§ 170.055 Definitions concerning a vessel.**

\* \* \* \* \*

(g) *Downflooding angle* means, except as specified by §§ 171.055(f), 172.090(d), 173.095(e), 174.015(b), and 174.035(b)(2) of this chapter, the static angle from the intersection of the vessel's centerline and waterline in calm water to the first opening that cannot be closed watertight and through which downflooding can occur.

\* \* \* \* \*

**PART 174—SPECIAL RULES PERTAINING TO VESSELS OF SPECIFIC TYPES**

10. The authority citation for part 174 continues to read as follows:

**Authority:** 42 U.S.C. 9118, 9119, 9153; 43 U.S.C. 1333; 46 U.S.C. 3306, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

11. In § 174.005, redesignate paragraphs (g) and (h) as paragraphs (f) and (g), respectively, to read as follows:

**§ 174.005 Applicability.**

\* \* \* \* \*

(f) Offshore supply vessel inspected under subchapter L of this chapter.

(g) Liftboat inspected under subchapter L of this chapter.

12. Revise subpart G of part 174 to read as follows:

**Subpart G—Special Rules Pertaining to Offshore Supply Vessels**

Sec.

- 174.180 Applicability.
- 174.185 Intact stability.
- 174.190 Collision bulkheads.
- 174.195 Bulkheads in machinery spaces.
- 174.200 Damaged stability in machinery spaces for all OSVs.
- 174.205 Additional damaged stability for OSVs carrying more than 16 offshore workers.
- 174.207 Damaged stability criteria.
- 174.210 Watertight doors in watertight bulkheads.
- 174.215 Drainage of weather deck.
- 174.220 Hatches and coamings.
- 174.225 Hull penetrations and shell connections.

**§ 174.180 Applicability.**

Each offshore supply vessel (OSV), except a liftboat inspected under

subchapter L of this chapter, must comply with this subpart.

**§ 174.185 Intact stability.**

(a) Each OSV must be shown by design calculations to meet, under each condition of loading and operation, the minimal requirements for metacentric height (GM) in § 170.170 of this chapter, and in either § 170.173 of this chapter or paragraphs (b) through (e) of this section.

(b) The area under each righting arm curve must be at least 0.08 meter-radians (15 foot-degrees) up to the smallest of the following angles:

- (1) The angle of maximum righting arm;
- (2) The downflooding angle; or
- (3) 40 degrees.

(c) The downflooding angle must not be less than 20 degrees.

(d) The righting arm curve must be positive to at least 40 degrees.

(e) The freeboard at the stern must be equal to the freeboard calculated to comply with subchapter E of this chapter or to the value taken from Table 174.185, whichever is less.

(f) For paragraphs (b) and (d) of this section, at each angle of heel an OSV's righting arm may be calculated considering either—

- (1) The vessel is permitted to trim free until the trimming moment is zero; or
- (2) The vessel does not trim as it heels.

(g) For the purpose of paragraphs (b) and (d) of this section, the method of calculating righting arms chosen must be the same for all calculations.

TABLE 174.185.—MINIMAL FREEBOARD AT THE STERN

LBP in meters (feet)	Freeboard at stern in millimeters (inches)
Less than 20 (65) .....	300 (12)
20 (65) but less than 30 (100) ....	380 (15)
30 (100) but less than 40 (130) ..	400 (18)
40 (130) but less than 50 (155) ..	500 (20)
50 (155) but less than 60 (190) ..	560 (22)
60 (190) but less than 70 (230) ..	610 (24)
70 (230) and greater .....	660 (26)

**§ 174.190 Collision bulkhead.**

(a) Each OSV must have a collision bulkhead in compliance with §§ 171.085(c)(1), (d), (e)(2), and (f) of this chapter.

(b) Penetration of the collision bulkhead by piping must be minimal, and, where fitted, piping must meet the requirements of §§ 56.50–1(b)(1) and (c) and 128.230 of this chapter.

**§ 174.195 Bulkheads in machinery spaces.**

(a) The bulkhead in each machinery space of each OSV must be watertight to the bulkhead deck.

(b) Each penetration of, and each opening in, a bulkhead in a machinery space must—

- (1) Be kept as high and as far inboard as practicable; and
- (2) Except as provided by § 174.210 of this subpart and by paragraph (c) of this section, have means to make it watertight.

(c) No penetration of a bulkhead in a machinery space by a ventilation duct need have means to make the bulkhead watertight if—

(1) Every part of the duct is at least 760 millimeter (30 inches) from the side of the OSV; and

(2) The duct is continuously watertight from the penetration to the main deck.

(d) Each penetration of a bulkhead in a machinery space by piping must meet the design requirements for material and pressure in subchapter F of this chapter.

**§ 174.200 Damaged stability in machinery spaces for all OSVs.**

Each OSV must be shown by design calculations to comply, under each afloat condition of loading and operation, with § 174.207 of this subpart in case of damage between any two watertight bulkheads in each machinery space.

**§ 174.205 Additional damaged stability for OSVs carrying more than 16 offshore workers.**

(a) *Calculations.* Each OSV carrying more than 16 offshore workers must be shown by design calculations to comply, under each afloat condition of loading and operation, with § 174.207 of this subpart in case of the damage specified by paragraph (b) of this section.

(b) *Character of damage.* For paragraph (a) of this section, design calculations must show that the OSV can survive damage at any place other than either the collision bulkhead or a transverse watertight bulkhead unless—

(1) The transverse watertight bulkhead is closer than the longitudinal extent of damage, specified by Table 174.207(a), to the adjacent transverse watertight bulkhead; or

(2) The transverse watertight bulkhead has a step or a recess, which must be assumed damaged, if it is both more than 3 meters (10 feet) in length and located within the transverse extent of damage specified by Table 174.207(a) of this section.

**§ 174.207 Damaged stability criteria.**

(a) *Extent of damage.* Damage must consist of penetrations having the dimensions specified by table 174.207(a) of this section, except that, if the most disabling penetrations are smaller than the penetrations specified by the table, damage must consist of the smaller penetrations.

(b) *Permeability of spaces.* The permeability of a floodable space must be as specified by Table 174.207(b) of this section.

(c) *Survival conditions.* An OSV is presumed to survive assumed damage if it meets the following conditions in the final stage of flooding:

(1) *Final waterline.* The final waterline, in the final stage of sinkage, heel, and trim, must be below the lower edge of an opening through which progressive flooding may take place, such as an air pipe, a tonnage opening, an opening closed by a weathertight door or hatch-cover, or a tank vent fitted with a ball check-valve. This opening does not include an opening closed by a—

- (i) Watertight manhole-cover;
- (ii) Flush scuttle;
- (iii) Small hatch-cover for a watertight cargo-tank that maintains the high integrity of the deck;
- (iv) Watertight door in compliance with § 174.210 of this subpart; or
- (v) Side scuttle of the non-opening type.

(2) *Angle of heel.* The angle of heel must not exceed 15 degrees.

(3) *Range of stability.* Through an angle of 20 degrees beyond its position of equilibrium after flooding, an OSV must meet the following conditions:

- (i) The righting arm curve must be positive.
- (ii) The righting arm must be at least 100 millimeters (4 inches).
- (iii) Each submerged opening must be weathertight. (A tank vent fitted with a ball check-valve is weathertight.)

(4) *Progressive flooding.* Piping, ducts, or tunnels within the assumed extent of damage must be either—

- (i) Equipped with arrangements, such as stop check-valves, to prevent progressive flooding of the spaces with which they connect; or
- (ii) Assumed in the calculations required by paragraph (a) of this section to permit progressive flooding of the spaces with which they connect.

(d) *Buoyancy of superstructure.* For paragraph (a) of this section, the buoyancy of any superstructure directly above the side damage must be considered in the most unfavorable condition.

TABLE 174.207(A).—Extent of Damage

Collision Penetration	
Longitudinal extent (vessels with LBP not greater than 45 meters [143 feet]).	.1L or 1.8 meters (6 feet); whichever is greater in length.
Longitudinal extent (vessels with LBP greater than 45 meters [143 feet]).	3 meters (10 feet) + .03L.
Transverse extent* ....	760 millimeters (30 inches).
Vertical extent. ....	From baseline upward without limit.

\*The transverse penetration applies inboard from the side of the vessel, at right angles to the centerline, at the level of the deepest load waterline.

TABLE 174.207(b).—PERMEABILITY OF SPACES

Spaces and tanks	Permeability
Storerooms .....	60 percent.
Accommodations .....	95 percent.
Machinery .....	85 percent.
Voids and passageways.	95 percent.
Dry-bulk tanks .....	0 (*) or 95 percent.
Consumable-liquid tanks.	0 (*) or 95 percent.
Other liquid tanks .....	0 (*) 0 (**) or 95 percent.

\*Whichever results in the more disabling condition.

\*\*If tanks are partly filled, the permeability must be determined from the actual density and amount of liquid carried.

**§ 174.210 Watertight doors in watertight bulkheads.**

(a) This section applies to each vessel with watertight doors in bulkheads made watertight in compliance with this chapter.

(b) Except as provided by paragraph (c) of this section, each watertight door must comply with subpart H of part 170 of this chapter.

(c) A Class-1 door may be installed at any place if—

(1) The door has a quick-acting closing-device operative from both sides of the door;

(2) The door is designed to withstand a head of water equivalent to the depth from the sill of the door to the bulkhead deck or 3 meters (10 feet), whichever is greater; and

(3) The vessel's pilothouse contains a visual indicator showing whether the door is open or closed.

(d) Each watertight door must be marked in compliance with § 131.893 of this chapter.

(e) If a Class-1 door is installed, the vessel's stability letter will require the master to ensure that the door is always closed except when being used for access.

**§ 174.215 Drainage of weather deck.**

The weather deck must have open rails to allow rapid clearing of water, or must have freeing ports in compliance with § 42.15-70 of this chapter.

**§ 174.220 Hatches and coamings.**

(a) Each hatch exposed to the weather must be watertight, except that the following hatches may be only weathertight:

(1) Each hatch on a watertight trunk that extends at least 430 millimeters (17 inches) above the weather deck.

(2) Each hatch in a cabin top.

(b) Each hatch cover must—

(1) Have securing-devices; and

(2) Be attached to the hatch frame or coaming by hinges, captive chains, or other devices to prevent its loss.

(c) Each hatch that provides access to quarters or to accommodation spaces for crew members or offshore workers must be capable of being opened and closed from either side.

(d) Except as provided by paragraph (e) of this section, a weathertight door with a permanent watertight coaming at least 380 millimeters (15 inches) high must be installed for each opening in a deckhouse or companionway that—

(1) Gives access into the hull; and

(2) Is in an exposed place.

(e) If an opening in a deckhouse or companionway has a Class-1 watertight door installed, the height of the watertight coaming need only accommodate the door.

**§ 174.225 Hull penetrations and shell connections.**

Each overboard discharge and shell connection except an engine exhaust must comply with §§ 56.50-95 and 128.230 of this chapter.

13. Revise subpart H of part 174 to read as follows:

**Subpart H—Special Rules Pertaining to Liftboats**

Sec.	
174.240	Applicability.
174.245	General.
174.250	Unrestricted service.
174.255	Restricted service.
174.260	Freeboard.

**§ 174.240 Applicability.**

Each liftboat inspected under subchapter L of this chapter must comply with this subpart.

**§ 174.245 General.**

Each liftboat must comply with §§ 174.210 through 174.225.

**§ 174.250 Unrestricted service.**

Each liftboat not limited to restricted service must comply with subpart C of this part in each condition of loading and operation.

**§ 174.255 Restricted service.**

This section applies to each liftboat unable to comply with § 174.250 and limited to restricted service as defined by § 125.160 of this chapter.

**(a) Intact stability.**

(1) Each liftboat must be shown by design calculations to meet, under each condition of loading and operation afloat, the following requirements:

(i) Those imposed by § 174.045, given a “K” value of at least 1.4.

(ii) A range of positive stability of at least 10 degrees extending from the angle of the first intercept of the curves of righting moment and wind heeling moment, either to the angle of the second intercept of those curves or to the angle of heel at which downflooding would occur, whichever angle is less.

(iii) A residual righting energy of at least 0.003 meter radians (5 foot-degrees) between the angle of the first intercept of the curves of righting moment and wind heeling moment, either to the angle of the second intercept of those curves or to the angle of heel at which downflooding would occur, whichever angle is less.

(2) For this section, each wind heeling moment must be calculated as prescribed by § 174.055 of this part using winds of 60 knots for normal conditions of operation afloat and of 70 knots for severe-storm conditions of operation afloat.

(3) For paragraph (a)(1) of this section, the initial metacentric height must be at least 300 millimeters (1 foot) for each leg position encountered while afloat including the full range of leg positions encountered while jacking.

**(b) Damaged stability.**

(1) Each liftboat must be designed so that, while it is in each of its normal operating conditions, its final equilibrium waterline will remain below the lowest edge of any opening through which additional flooding can occur if the liftboat is subjected simultaneously to—

(i) Damage causing flooding described by paragraph (b)(4) of this section; and

(ii) A wind heeling moment calculated in compliance with § 174.055(b) using a wind speed of 50 knots.

(2) Each liftboat must have a means of closing off each pipe, ventilation system, and trunk in each compartment described by paragraph (b)(4) of this section if any part of the pipe, ventilation system, or trunk is within 760 millimeters (30 inches) of the hull.

(3) For compliance with paragraph (b)(1) of this section, no compartment on the liftboat may be ballasted or pumped out to compensate for the

flooding described by paragraph (b)(4) of this section.

(4) For compliance with paragraph (b)(1) of this section, each compartment within 760 millimeters (30 inches) of the hull, excluding the bottom of the liftboat, between two adjacent main watertight bulkheads and the uppermost continuous deck or first superstructure deck where superstructures are fitted must be assumed subject to simultaneous flooding.

(5) In the calculations required by paragraph (b)(1) of this section, the permeability of a floodable space must be as listed by Table 174.205(d).

(c) *On-bottom stability.* Each liftboat must be shown by design calculations to exert a continuous downward force on each footing when the vessel is supported on the bottom with footings and is subjected to the forces of waves, currents, and winds of 70 knots under normal conditions of operation, and winds of 100 knots under severe-storm conditions of operation when elevated in a safe place, if this place is other than a harbor of safe refuge. The waves and currents must be appropriate for the winds and place.

**§ 174.260 Freeboard.**

(a) Each liftboat not required to obtain and maintain a loadline in compliance with subchapter E of this chapter must place markings on each side of the vessel amidships. These markings must each consist of a horizontal line 460 millimeters (18 inches) in length and 25 millimeters (1 inch) in height. The upper edges of the markings must be at a distance equal to the authorized freeboard measured vertically below the intersection of the continuation outwards of the upper surface of the weather deck and the outer surface of the shell. This distance must be at least 610 millimeters (24 inches).

(b) The markings required by paragraph (a) of this section may not be submerged in any condition of loading or operation.

**PART 175—GENERAL PROVISIONS**

14. The authority citation for part 175 continues to read as follows:

**Authority:** 46 U.S.C. 3306, 3703; 49 U.S.C. App. 1804; 49 CFR 1.45, 1.46; Section 175.01-3 also issued under the authority of 44 U.S.C. 3507.

15. Add § 175.115 to read as follows:

**§ 175.115 Applicability to offshore supply vessels.**

(a) Existing OSVs of more than 15 but less than 100 gross tons are subject to inspection under this subchapter. New OSVs of more than 15 but less than 100



gross tons are subject to inspection under subchapter L of this chapter.

(b) Each existing OSV permitted grandfathering under paragraph (a) of this section must complete construction and have a Certificate of Inspection by March 16, 1998.

16. In § 175.400, add definitions of "Offshore supply vessel (OSV)," "Existing OSV," and "New OSV" to read as follows:

**§ 175.400 Definitions of terms used in this subchapter.**

\* \* \* \* \*

*Offshore supply vessel (OSV)* means a vessel that—

(1) Is propelled by machinery other than steam;

(2) Is of above 15 gross tons and of less than 500 gross tons (as measured under the Standard, Dual, or Simplified Measurement System under part 69, subpart C, D, or E, of this chapter), or is less than 6,000 gross tons (as measured under the Convention Measurement System under part 69, subpart B, of this chapter); and

(3) Regularly carries goods, supplies, or equipment in support of exploration, exploitation, or production of offshore mineral or energy resources.

\* \* \* \* \*

*Existing OSV* means an OSV that was contracted for, or the keel of which was laid, before March 15, 1996.

\* \* \* \* \*

*New OSV* means an OSV—

(1) That was contracted for, or the keel of which was laid, on or after March 15, 1996; or

(2) That underwent a major conversion initiated on or after March 15, 1996.

\* \* \* \* \*

Dated: August 28, 1997.

**R.D. Herr,**

*Vice Admiral, U.S. Coast Guard, Acting Commandant.*

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