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Part IV

Department of Homeland Security

Coast Guard

46 CFR Part 32 et al.

**Review and Update of Standards for
Marine Equipment; Proposed Rule**

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Parts 32, 50, 52, 53, 54, 56, 58, 59, 61, 62, 63, 76, 92, 110, 111, 113, 162, 170, 175, 182, and 183

[USCG-2003-16630]

RIN 1625-AA83

Review and Update of Standards for Marine Equipment

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard proposes to make certain technical amendments to its rules relating to standards for marine equipment, and to update the incorporation in those rules of references to national and international safety standards. This rulemaking is part of an ongoing effort for regulatory review and reform that increases the focus on results, decreases the focus on process, and expands compliance options for the regulated public.

DATES: Comments and related material must reach the Docket Management Facility on or before September 28, 2004.

ADDRESSES: You may submit comments identified by Coast Guard docket number USCG-2003-16630 to the Docket Management Facility at the U.S. Department of Transportation. To avoid duplication, please use only one of the following methods:

- (1) Web site: <http://dms.dot.gov>.
- (2) Mail: Docket Management Facility (USCG-2003-16630), U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590-0001.
- (3) Fax: (202) 493-2251.
- (4) Delivery: Room PL-401 on the Plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is (202) 366-9329.

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

You may inspect the material proposed for incorporation by reference at room 1210, U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593-0001 between 8 a.m. and 3 p.m., Monday through Friday, except Federal holidays. The telephone number is (202) 267-1181. Copies of the material are available as indicated in the "Incorporation by Reference" section of this preamble.

FOR FURTHER INFORMATION CONTACT: If you have questions on this proposed

rule, call Thane Gilman, Project Manager, Office of Design and Engineering Standards (G-MSE), U.S. Coast Guard, 2100 Second Street SW., Washington, DC 20593-0001, telephone (202) 267-2206. If you have questions on viewing or submitting material to the docket, call Andrea M. Jenkins, Program Manager, Docket Operations, Department of Transportation, telephone (202) 366-0271.

SUPPLEMENTARY INFORMATION:

Public Participation and Request for Comments

We encourage you to participate in this rulemaking by submitting comments and related materials. All comments received will be posted, without change, to <http://dms.dot.gov> and will include any personal information you have provided. We have an agreement with the Department of Transportation (DOT) to use the Docket Management Facility. Please see DOT's "Privacy Act" paragraph below.

Submitting comments: If you submit a comment, please include your name and address, identify the docket number for this rulemaking (USCG-2003-16630), indicate the specific section of this document to which each comment applies, and give the reason for each comment. You may submit your comments and material by electronic means, mail, fax, or delivery to the Docket Management Facility at the address under **ADDRESSES**; but please submit your comments and material by only one means. If you submit them by mail or delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period. We may change this proposed rule in view of them.

Viewing comments and documents: To view comments, as well as documents mentioned in this preamble as being available in the docket, go to <http://dms.dot.gov> at any time and conduct a search using the docket number. You may also visit the Docket Management Facility in room PL-401 on the Plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Privacy Act: Anyone can search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association,

business, labor union, *etc.*). You may review the Department of Transportation's Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477), or you may visit <http://dms.dot.gov>.

Public Meeting

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

Background and Purpose

The Coast Guard has actively participated in the development of industry standards of safety for marine equipment at the International Maritime Organization (IMO), the International Organization for Standardization (ISO), the American Society for Testing and Materials (ASTM), and other standards-setting bodies that belong to the American National Standards Institute (ANSI).

This rulemaking is part of an ongoing effort for regulatory review and reform, with the goals of: (1) Updating the references to incorporated standards that have been modified; (2) removing obsolete rules; (3) focusing on results instead of process; and (4) expanding efforts to promote consensual rulemaking.

Discussion of Proposed Rule

A number of comprehensive regulatory projects have already aligned many Coast Guard rules with national and international standards. This proposed rule would affect only inspected commercial vessels. No phase-in period is necessary, as this proposed rule would not be imposing new requirements.

In general, the proposed rule would make the following changes:

Authority cite revisions—we would amend the "authority" information given in the Code of Federal Regulations (CFR) for affected parts, in order to reflect new statutory authority and the transfer of the Coast Guard to the new Department of Homeland Security.

Corrections—we would amend several sections to correct prior inadvertent errors or deletions.

Deletion of obsolete or superfluous material—we would remove material that is obsolete or superfluous to a modern regulatory scheme.

International System measurements—we would amend several sections to give metric (International System)

measurements rather than English measurements. Where both a metric and an English measurement appear, but one is given in parentheses, the measure we intend to enforce is given first and the parenthetical measurement is an approximation intended only for the convenience of the reader.

Lowered thresholds—we would lower regulatory thresholds in some sections.

Stylistic revisions—we would revise the language of some sections, primarily for greater clarity.

Updated cross references—we would update cross references to reflect the relocation, within the CFR, of pertinent provisions.

Updated industry standards—we would update references to industry standards by adding new references, replacing references to superseded

standards or editions, and by conforming text accordingly.

The following tables indicate the sections we propose to amend, and why. Table 1 lists each affected section, and gives the reason or reasons why we propose to amend it. Table 2 groups the reasons for change, as discussed above, and shows which sections are affected by each reason.

TABLE 1.—CFR PART OR SECTION AFFECTED—REASON FOR CHANGE

Part or section	Reason for change
Part 32	Authority cite revision.
32.53–30	Corrections.
Part 50	Authority cite revision.
50.20–33	Deletion of obsolete or superfluous material.
50.25–1(e)	Corrections.
Part 52	Authority cite revision.
52.01–1(b)	Updated industry standards.
52.01–90(d)	Updated industry standards.
52.01–90(e)	Deletion of obsolete or superfluous material.
52.01–105(b)(2)	Updated cross references.
52.01–120(a)(6)	Updated industry standards.
52.05–20	Updated industry standards.
Part 53	Authority cite revision.
53.01–1(b)	Updated industry standards.
53.12–1	Updated industry standards.
Part 54	Authority cite revision.
54.01–1(b)	Updated industry standards.
54.01–2	Deletion of obsolete or superfluous material, Updated industry standards.
54.01–5 Table 5(b)	Stylistic revisions.
54.01–10	Updated industry standards.
54.01–15	International System measurements.
54.10–5	Corrections, Updated industry standards.
54.10–10(b)	Lowered thresholds.
54.10–15(c)	Lowered thresholds.
54.10–20(a)(6)	Updated industry standards.
54.15–1	Updated industry standards.
54.15–3	Updated industry standards.
54.15–25(c)	Corrections.
54.25–3	Updated industry standards.
54.25–5	Updated industry standards.
54.25–15	International System measurements, Updated industry standards.
54.25–20(c)	Updated industry standards.
Part 56	Authority cite revision
56.01 note	Deletion of obsolete or superfluous material.
56.01–2	Updated industry standards.
56.01–3	Updated industry standards.
56.01–5	Updated industry standards.
56.07–5	Corrections, Updated industry standards.
56.07–10	Updated industry standards.
56.10–1	Updated industry standards.
56.10–5	Updated industry standards.
56.15–1	Updated industry standards.
56.15–5	Updated industry standards.
56.20–1	Updated industry standards.
56.20–5	Updated industry standards.
56.20–9	Stylistic revisions.
56.20–15	Updated industry standards.
56.25–5	Corrections.
56.25–7	Corrections, Updated industry standards.
56.25–15	Corrections.
56.25–20	Updated industry standards.
56.30–1	Updated industry standards.
56.30–5	Updated industry standards.
56.30–10	Updated industry standards.
56.30–20	Updated industry standards.
56.35–1	Updated industry standards.
56.50–1	Updated industry standards.
56.50–10	Deletion of obsolete or superfluous material.
56.50–15	Updated industry standards.

TABLE 1.—CFR PART OR SECTION AFFECTED—REASON FOR CHANGE—Continued

Part or section	Reason for change
56.50–30	Updated industry standards.
56.50–40	Updated industry standards.
56.50–65	Updated industry standards.
56.50–70	Stylistic revisions, Updated cross references, Updated industry standards.
56.50–97	Updated industry standards.
56.60–1	Updated industry standards.
56.60–3	Stylistic revisions.
56.60–5	International System measurements.
56.60–25	Corrections, International System measurements, Updated industry standards.
56.65–1	Updated industry standards.
56.70–10	Updated industry standards.
56.70–15	Updated industry standards.
56.75–5	Updated industry standards.
56.75–10	Updated industry standards.
56.75–15	Updated industry standards.
56.75–25	Updated industry standards.
56.80–5	Updated industry standards.
56.80–15	Updated industry standards.
56.85–5	Updated industry standards.
56.85–10	Updated industry standards.
56.85–15	Updated industry standards.
56.90–5	Updated industry standards.
56.90–10	Updated industry standards.
56.95–1	Updated industry standards.
56.95–10	Updated industry standards.
56.97–1	Updated industry standards.
56.97–25	Updated industry standards.
56.97–30	Updated industry standards.
Part 58	Authority cite revision.
58.01–10	International System measurements.
58.03–1	Updated industry standards.
58.16–10	Stylistic revisions.
Part 59	Authority cite revision.
59.01–2	Updated industry standards.
59.01–5	Updated industry standards.
Part 61	Authority cite revision.
61.15–10	Corrections.
Part 62	Authority cite revision.
62.05–1	Stylistic revisions, Updated industry standards.
62.25–1	Deletion of obsolete or superfluous material.
62.25–5	Deletion of obsolete or superfluous material.
62.25–30	Updated industry standards.
62.35–5	Updated industry standards.
62.35–35	Updated industry standards.
62.35–40	Updated industry standards.
62.35–50	Updated industry standards.
62.50–30	Updated industry standards.
Part 63	Authority cite revision.
63.01–3	Deletion of obsolete or superfluous material.
63.05–1	Updated industry standards.
63.25–1	Deletion of obsolete or superfluous material.
63.25–9	Updated industry standards.
Part 76	Authority cite revision.
76.50–5	International System measurements.
Part 92	Authority cite revision.
92.15–10	Deletion of obsolete or superfluous material.
Part 110	Authority cite revision.
110.10–1	Updated industry standards.
110.15–1	Updated industry standards.
Part 111	Authority cite revision.
111.01–9	Updated industry standards.
111.05–7	Updated industry standards.
111.05–9	Updated industry standards.
111.05–33	Updated industry standards.
111.12–1	Updated industry standards.
111.12–3	Updated industry standards.
111.12–5	Updated industry standards.
111.12–7	Updated industry standards.
111.15–2	Updated industry standards.
111.20–15	Updated industry standards.
111.25–5	Updated industry standards.
111.30–1	Updated industry standards.

TABLE 1.—CFR PART OR SECTION AFFECTED—REASON FOR CHANGE—Continued

Part or section	Reason for change
111.30-5	Updated industry standards.
111.30-19	Updated industry standards.
111.33-3	Updated industry standards.
111.33-5	Updated industry standards.
111.33-11	Updated industry standards.
111.35-1	Updated industry standards.
111.40-1	Updated industry standards.
111.50-3	Updated industry standards.
111.50-9	Updated industry standards.
111.52-5	Updated industry standards.
111.53-1	Updated industry standards.
111.54-1	Updated industry standards.
111.55-1	Updated industry standards.
111.59-1	Updated industry standards.
111.60-1	Updated industry standards.
111.60-2	Updated industry standards.
111.60-3	Updated industry standards.
111.60-5	Updated industry standards.
111.60-6	Updated industry standards.
111.60-11	Updated industry standards.
111.60-13	Updated industry standards.
111.60-19	Updated industry standards.
111.60-21	Updated industry standards.
111.60-23	Updated industry standards.
111.70-1	Updated industry standards.
111.70-3	Updated industry standards.
111.75-5	Updated industry standards.
111.75-20	Updated industry standards.
111.81-1	Updated industry standards.
111.91-1	Updated industry standards.
111.101-1	Updated cross references.
111.105-1	Updated industry standards.
111.105-3	Updated industry standards.
111.105-5	Updated industry standards.
111.105-7	Updated industry standards.
111.105-9	Updated industry standards.
111.105-11	Updated industry standards.
111.105-15	Updated industry standards.
111.105-17	Updated industry standards.
111.105-31	Updated industry standards.
111.105-39	Updated industry standards.
111.105-40	Updated industry standards.
111.107-1	Updated industry standards.
Part 113	Authority cite revision.
113.05-7	Updated industry standards.
113.25-12	Deletion of obsolete or superfluous material.
113.25-6	Updated industry standards.
113.30-3	Deletion of obsolete or superfluous material.
113.30-20	Updated cross references.
113.30-25	Updated industry standards.
113.65-5	Updated industry standards.
Part 162	Authority cite revision.
162.017-1	Updated industry standards.
162.017-3	Updated industry standards.
Part 170	Authority cite revision.
170.015	Updated industry standards.
Part 175	Authority cite revision.
175.600	Updated industry standards.
Part 182	Authority cite revision.
182.455	Corrections.
182.500	Updated industry standards.
182.520	Updated industry standards.
Part 183	Authority cite revision.
183.230	Corrections.

TABLE 2.—REASON FOR CHANGE—CFR PART OR SECTION AFFECTED

Reason for change	Section
Authority cite revision	32, 50, 52, 53, 54, 56, 58, 59, 61, 62, 63, 76, 92, 110, 111, 113, 162, 170, 175, 182, 183
Corrections	32.53-30, 50.20-7, 50.25-1(e), 54.10-5, 54.15-25(c), 56.07-5, 56.25-5, 56.25-7, 56.25-15, 56.60-25, 61.15-10, 182.455, 183.230

TABLE 2.—REASON FOR CHANGE—CFR PART OR SECTION AFFECTED—Continued

Reason for change	Section
Deletion of obsolete or superfluous material.	50.20–33, 52.01–90(e), 54.01–2, 56.01 note, 56.50–10, 62.25–1, 62.25–5, 63.01–3, 63.25–1, 92.15–10, 113.25–12, 113.30–3
International System measurements	54.01–15, 54.25–15, 56.60–5, 56.60–25, 58.01–10, 76.50–5
Lowered thresholds	54.10–10(b), 54.10–15(c), 56.01–10
Stylistic revisions	54.01–5 Table 5(b), 56.20–9, 56.50–70, 56.60–3, 58.16–10, 62.05–1
Updated cross references	52.01–105(b)(2), 56.50–70, 111.101–1, 113.30–20
Updated industry standards	52.01–1(b), 52.01–90(d), 52.01–120(a)(6), 52.05–20, 53.01–1(b), 53.12–1, 54.01–1(b), 54.01–2, 54.01–10, 54.10–5, 54.10–20(a)(6), 54.15–1, 54.15–3, 54.25–3, 54.25–5, 54.25–15(b), 54.25–20(c), 56.01–2, 56.01–3, 56.01–5, 56.07–5, 56.07–10, 56.10–1, 56.10–5, 56.15–1, 56.15–5, 56.20–1, 56.20–5, 56.25–7, 56.25–20, 56.30–1, 56.30–5, 56.30–10, 56.30–20, 56.35–1, 56.50–1, 56.50–15, 56.50–30, 56.50–40, 56.50–65, 56.50–70, 56.50–97, 56.60–1, 56.65–1, 56.70–10, 56.70–15, 56.75–5, 56.75–10, 56.75–15, 56.75–25, 56.80–5, 56.80–15, 56.85–5, 56.85–10, 56.85–15, 56.90–5, 56.90–10, 56.95–1, 56.95–10, 56.97–1, 56.97–25, 56.97–30, 58.03–1, 59.01–2, 59.01–5, 62.05–1, 62.25–30, 62.35–5, 62.35–35, 62.35–40, 62.35–50, 62.50–30, 63.05–1, 63.25–9, 111.01–9, 111.05–7, 111.05–9, 111.05–33, 110.10–1, 110.15–1, 111.12–1, 111.12–3, 111.12–5, 111.12–7, 111.15–2, 111.20–15, 111.25–5, 111.30–1, 111.30–5, 111.30–19, 111.33–3, 111.33–5, 111.33–11, 111.35–1, 111.40–1, 111.50–3, 111.50–9, 111.52–5, 111.53–1, 111.54–1, 111.55–1, 111.59–1, 111.60–1, 111.60–2, 111.60–3, 111.60–5, 111.60–6, 111.60–11, 111.60–13, 111.60–19, 111.60–21, 111.60–23, 111.70–1, 111.70–3, 111.75–20, 111.75–5, 111.81–1, 111.91–1, 111.105–1, 111.105–3, 111.105–5, 111.105–7, 111.105–9, 111.105–11, 111.105–15, 111.105–17, 111.105–31, 111.105–39, 111.105–40, 111.107–1, 113.05–7, 113.30–25, 113.65–5, 170.015, 175.600, 182.500, 182.520

Incorporation by Reference

Material proposed for incorporation by reference appears in the regulatory text proposed for 46 CFR 52.01–1, 53.01–1, 54.01–1, 56.01–2, 58.03–1, 59.01–2, 62.05–1, 63.05–1, 110.10–1, 162.017–1, 170.015, and 175.600. You may inspect this material at U.S. Coast Guard Headquarters where indicated under **ADDRESSES**. Copies of the material are available from the sources listed in the regulatory text proposed for 46 CFR 52.01–1, 53.01–1, 54.01–1, 56.01–2, 58.03–1, 59.01–2, 62.05–1, 63.05–1, 110.10–1, 162.017–1, 170.015, and 175.600.

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

Regulatory Evaluation

This proposed rule is not a “significant regulatory action” under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget (OMB) has not reviewed it under that Order. It is not “significant” under the regulatory policies and procedures of the Department of Homeland Security (DHS).

We expect the economic impact of this proposed rule to be so minimal that a full Regulatory Evaluation under the regulatory policies and procedures of DHS would be unnecessary.

Most of the provisions and standards being incorporated are already being

used by industry, while those being deleted may have become outdated because of changes in technology or fleet composition. Further, compliance with them would not be retroactive and would apply to new vessel construction. We did estimate costs for two new system requirements that we assume most of the existing fleet do not meet. If any owner or operator of an existing vessel of the current fleet chooses to upgrade, then it is a voluntary upgrade. Consequently, the economic impact of this proposed rule is expected to be minimal.

Moreover, the Coast Guard believes that aligning its regulations with current international and national standards would benefit the maritime industry by easing confusion and simplifying the requirements to which commercial vessels are subject. If you believe this proposed rule would have a significant economic impact on industry owners and operators, please submit a comment to the Docket Management Facility at the address under **ADDRESSES**. In your comment, specifically explain why you think the rulemaking would be significant.

The following is a summary of the assumptions, costs, and benefits of this proposed rule:

General Assumptions

The cost analysis of this proposed rule covers a 10-year period beginning in 2003 and ending in 2012.

In accordance with current guidelines from OMB, estimated costs and benefits are discounted at seven percent present value in year 2003 dollars.

The annual affected populations in §§ 62.25–1 and 62.35–50 are based on the average vessel population increase from 1996 through 2001 as estimated from currently available data from the Coast Guard Marine Safety Management System (MSMS).

Affected vessels include newly constructed, self-propelled, certificated, U.S.-flag commercial and passenger vessels meeting large tonnage threshold restrictions. The affected commercial vessels are 500 gross tons and over. The affected commercial vessels are certificated under a single subchapter to include D, I, and U, or certificated under two subchapters for multiple operations to include I and A, O and I, and O and D (generally referred to as IA, OI, and OD certificated vessels). The affected passenger vessels are 100 gross tons and over that are certificated under Subchapter H.

Operators, owners, and manufacturers of vessels affected by this proposed rule currently practice and adhere to national and international standards developed by organizations composed of representatives from a cross section of interest groups affected by these standards.

Costs

This proposed rule would not impose any additional costs to owners and operators of existing vessels because it would not be retroactive. Furthermore, new vessels currently coming into service and those built in the future will have already been equipped and built under these standards.

There are some quantifiable voluntary costs associated with the proposed rule

detailed below. These costs however, are for additional marine safety equipment and testing options that are not mandatory for the current fleet of vessels and are currently being practiced by industry. The 10-year total accumulated present value of the voluntary costs for this proposed rule would range between \$285,579 and \$488,490. Nevertheless, this proposed rule would not be retroactive, and we assume that future vessels would meet these requirements with no additional costs attributed to the requirements of this proposed rule. The present value of voluntary costs are distributed as follows:

(1) Section 62.25–1, Backup means of cooling computer consoles: The approximate 10-year present value cost to industry would range between \$263,033 and \$420,853.

This requirement would affect approximately seven new self-propelled U.S.-flag vessels per year, if vessel manufacturers and owners were not following established ABS guidelines. The one-time parts and installation costs would range between \$5,000 and \$8,000 per new vessel. However, we believe it would be unlikely that manufacturers would not provide backup computer-cooling systems given current demands for computer system performance and current industry standards.

(2) Section 62.35–50, Additional fire alarms: The approximate 10-year present value cost to industry would range between \$22,546 and \$67,637.

This proposed requirement would affect approximately six new self-propelled (diesel) U.S.-flag vessels per year. The one-time costs for parts and installation of the additional fire alarms and sensor devices would range between \$500 and \$1,500 per new vessel. However, most new vessels would meet these additional fire alarm requirements because they have been in effect since 1986 when ABS added them to their Rules for Building and Classing Steel Vessels.

Benefits

This proposed rule would eliminate confusion caused by outdated and conflicting rules on safety of marine engineering for owners, operators, and manufacturers of vessels. The proposed changes would update and harmonize outdated rules to meet current national and international standards. In addition, this proposed rule would give the maritime industry clear instructions and descriptions of how to comply with various rules.

Small Entities

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

The Coast Guard certifies under 5 U.S.C. 605(b) that this proposed rule would not have a significant economic impact on a substantial number of small entities because it is not retroactive and because it imposes no mandatory costs on owners or operators of vessels.

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

Collection of Information

This proposed rule would call for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them. We have analyzed this proposed rule under that Order and have determined that it does not have implications for federalism. This proposed rule would revise outdated standards on safety of marine equipment with international and national standards created and approved in part by State and local governments that participate in organizations that develop national standards for marine operation and safety.

Unfunded Mandates

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their regulatory actions not specifically required by law. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of \$100 million or more

in any one year. This proposed rule would not result in Unfunded Mandates because it does not require regulatory actions that result in such expenditures.

Taking of Private Property

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

Civil Justice Reform

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

Protection of Children

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

Indian Tribal Governments

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

Energy Effects

We have analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a “significant energy action” under that order because it is not a “significant regulatory action” under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

Environment

We have analyzed this proposed rule under Commandant Instruction M16475.ID (the “Instruction”), which

guides the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA)(42 U.S.C. 4321–4370f), and have made a preliminary determination that there are no factors in this case that would limit the use of a categorical exclusion under section 2.B.2 of the Instruction. Therefore, we believe that this proposed rule should be categorically excluded, under Figure 2–1, paragraph (34)(d) of the Instruction, from further environmental documentation. This proposed rule would replace outdated safety standards for marine equipment with current national and international standards, and therefore would not have any impact on the environment and might even provide future benefits by preventing future environmental casualties. A preliminary “Environmental Analysis Check List” is available in the docket where indicated under the “Public Participation and Request for Comments” section of the preamble. Comments on this section will be considered before we make the final decision on whether this rule should be categorically excluded from further environmental review.

List of Subjects

46 CFR Part 32

Cargo vessels, Fire prevention, Marine safety, Navigation (water), Occupational safety and health, Reporting and recordkeeping requirements, Seamen.

46 CFR Parts 50, 52, 53, 54, 56, 58, 59, 61, 62, 63, and 110

Reporting and recordkeeping requirements, Vessels.

46 CFR Part 76

Fire prevention, Marine safety, Passenger vessels.

46 CFR Part 92

Cargo vessels, Fire prevention, Marine safety, Occupational safety and health, Seamen.

46 CFR Part 111

Vessels.

46 CFR Part 113

Communications equipment, Fire prevention, Vessels.

46 CFR Part 162

Fire prevention, Marine safety, Oil pollution, Reporting and recordkeeping requirements.

46 CFR Part 170

Marine safety, Reporting and recordkeeping requirements, Vessels.

46 CFR Parts 175 and 177

Marine safety, Passenger vessels, Reporting and recordkeeping requirements.

46 CFR Parts 182 and 183

Marine safety, Passenger vessels.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 46 CFR parts 32, 50, 52, 53, 54, 56, 58, 59, 61, 62, 63, 76, 92, 110, 111, 113, 162, 170, 175, 182, and 183 as follows:

PART 32—SPECIAL EQUIPMENT, MACHINERY, AND HULL REQUIREMENTS

1. Revise the authority citation for part 32 to read as follows:

Authority: 46 U.S.C. 2103, 3306, 3703, 3719; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1; Subpart 32.59 also issued under the authority of Sec. 4109, Pub. L. 101–380, 104 Stat. 515.

2. Add § 32.53–30, under Subpart 32.53—Inert-Gas System, to read as follows:

§ 32.53–30 Positive pressure—T/ALL.

Each inert-gas system must be designed to enable the operator to maintain a gas pressure of 100 millimeters (4 inches) of water on filled cargo tanks and during loading and unloading of cargo tanks.

PART 50—GENERAL PROVISIONS

3. Revise the authority citation for part 50 to read as follows:

Authority: 43 U.S.C. 1333; 46 U.S.C. 3306, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1; Section 50.01–20 also issued under the authority of 44 U.S.C. 3507.

§ 50.20–33 [Removed and Reserved]

4. Remove and reserve § 50.20–33.

§ 50.25–1 [Revised]

5. In § 50.25–1(e), remove the term “58.30–17” and add, in its place, the term “58.30–15”.

PART 52—POWER BOILERS

6. Revise the authority citation for part 52 to read as follows:

Authority: 46 U.S.C. 3306, 3307, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

7. In § 52.01–1(b), revise the entry “American Society of Mechanical Engineers (ASME) International” to read as follows:

§ 52.01–1 Incorporation by reference.

* * * * * (b) * * *

American Society of Mechanical Engineers (ASME) International, Three Park Avenue, New York, NY 10016–5990

Boiler and Pressure Vessel Code, Section I, Power Boilers, 2001

52.01–2; 52.01–5; 52.01–50; 52.01–90; 52.01–95; 52.01–100; 52.01–105; 52.01–110; 52.01–115; 52.01–120; 52.01–135; 52.01–140; 52.01–145; 52.05–1; 52.05–15; 52.05–20; 52.05–30; 52.05–45; 52.15–1; 52.15–5; 52.20–1; 52.20–17; 52.20–25; 52.25–3; 52.25–5; 52.25–7; 52.25–10.

§ 52.01–90 [Revised]

8. In § 52.01–90, in paragraph (d), remove the words “(modifies PG–8.2.2.)” and add in their place, the words “(modifies PG–2.2.)”; and remove paragraph (e).

§ 52.01–105 [Revised]

9. In § 52.01–105(b)(2), remove the cross-reference “§ 56.31–1” and add, in

its place, the cross-reference “§ 56.35–1”.

10. Revise § 52.01–120(a)(6) to read as follows:

§ 52.01–120 Safety valves and safety relief valves (modifies PG–67 through PG–73).

(a) * * *

(6) (Modifies PG–67). Drum safety valves must be set to relieve at a pressure not in excess of that allowed by

the Certificate of Inspection. Where for any reason this is lower than the pressure for which the boiler was originally designed and the revised capacity of the safety valve cannot be recomputed and certified by the valve manufacturer, one of the tests described in PG–69 of the ASME Code must be conducted in the presence of the Inspector to ensure that the relieving

capacity is sufficient at the lower pressure.

* * * * *

11. Revise § 52.05–20 to read as follows:

§ 52.05–20 Radiographic and ultrasonic examination (modifies PW–11 and PW–41.1).

Radiographic and ultrasonic examination of welded joints must be as described in PW–11 of the ASME Code, except that parts of boilers fabricated of pipe material such as drums, shells,

downcomers, risers, cross pipes, headers, and tubes containing only circumferentially welded butt joints, must be nondestructively examined as required by § 56.95–10 of this subchapter even though they may be exempted by the limits on size specified in Table PW–11 and PW–41.1 of the ASME Code.

PART 53—HEATING BOILERS

12. Revise the authority citation for part 53 to read as follows:

Authority: 46 U.S.C. 3306, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

13. In § 53.01–1(b), revise the entry “American Society of Mechanical Engineers (ASME) International” to read as follows:

§ 53.01–1 Incorporation by reference.

* * * * *

(b) * * *

American Society of Mechanical Engineers (ASME) International, Three Park Avenue, New York, NY 10016–5990
Boiler and Pressure Vessel Code, Section IV, Heating Boilers, July 2001

53.01–5; 53.01–10; 53.05–1; 53.05–3; 53.05–5; 53.10–1; 53.10–3; 53.10–10; 53.10–15; 53.12–1.

14. Revise the heading for Subpart 53.12–1 to read as follows:

Subpart 53.12—Instruments, fittings, and controls (Article 6)

PART 54—PRESSURE VESSELS

15. Revise the authority citation for part 54 to read as follows:

Authority: 33 U.S.C. 1509; 43 U.S.C. 1333; 46 U.S.C. 3306, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

16. In § 54.01–1(b), revise the entries “American Society of Mechanical Engineers (ASME) International” and

“Manufacturers Standardization Society (MSS)” to read as follows:

§ 54.01–1 Incorporation by reference.

* * * * *

(b) * * *

American Society of Mechanical Engineers (ASME) International, Three Park Avenue, New York, NY 10016–5990
Boiler and Pressure Vessel Code, Section VIII, Division 1, Pressure Vessels, July 2001.

* * * * *

Manufacturers Standardization Society (MSS)
127 Park Street NE, Vienna, VA 22180.
SP–25, Standard Marking System for Valves, Fittings, Flanges, and Unions, 1998.

54.01–2; 54.01–5; 54.01–15; 54.01–18; 54.01–25; 54.01–30; 54.01–35; 54.03–1; 54.03–5; 54.05–1; 54.10–1; 54.10–3; 54.10–5; 54.10–10; 54.10–15; 54.15–1; 54.15–5; 54.15–10; 54.15–13; 54.20–1; 54.20–3; 54.25–1; 54.25–3; 54.25–5; 54.25–8; 54.25–10; 54.25–15; 54.25–20; 54.25–25; 54.30–3; 54.30–5; 54.30–10

* * * * *

54.01–25

17. In § 54.01–2, revise Table 54.01–1(a) to read as follows:

§ 54.01–2 Adoption of Division 1 of section VIII of the ASME Code.

(a) * * *

TABLE 54.01–1(A).—LIMITATIONS AND MODIFICATIONS IN THE ADOPTION OF DIVISION 1 OF SECTION VIII, ASME CODE

Paragraphs in Section VIII, ASME Code ¹ and disposition	Unit of this part
U–1 and U–2 modified by	54.01–5 through 54.01–15.
U–1(c) replaced by	54.01–5.
U–1(d) replaced by	54.01–5(a) and 54.01–15.
U–1(g) modified by	54.01–10.
U–1(c)(2) modified by	54.01–15.
UG–11 modified by	54.01–25.
UG–22 modified by	54.01–30.
UG–25 modified by	54.01–35.
UG–28 modified by	54.01–40.
UG–84 replaced by	54.05–1.
UG–90 and UG–91 replaced by	54.10–3.

TABLE 54.01–1(A).—LIMITATIONS AND MODIFICATIONS IN THE ADOPTION OF DIVISION 1 OF SECTION VIII, ASME CODE—Continued

Paragraphs in Section VIII, ASME Code ¹ and disposition	Unit of this part
UG–92 through UG–103 modified by	54.10–1 through 54.10–15.
UG–98 reproduced by	54.10–5.
UG–115 through UG–120 modified by	54.10–1.
UG–116, except (k), replaced by	54.10–20(a).
UG–116(k) replaced by	54.10–20(b).
UG–117 replaced by	54.10–20(c).
UG–118 replaced by	54.10–20(a).
UG–119 modified by	54.10–20(d).
UG–120 modified by	54.10–25.
UG–125 through UG–137 modified by	54.15–1 through 54.15–15.
UW–1 through UW–65 modified by	54.20–1.
UW–2(a) replaced by	54.01–5(b) and 54.20–2.
UW–2(b) replaced by	54.01–5(b) and 54.20–2.
UW–9, UW–11(a), UW–13, and UW–16 modified by	54.20–3.
UW–11(a) modified by	54.25–8.
UW–26, UW–27, UW–28, UW–29, UW–47, and UW–48 Modified by	54.20–5.
UB–1 modified by	54.23–1
UB–2 modified by	52.01–95(d) and 56.30–30(b)(1).
UCS–6 modified by	54.25–3.
UCS–56 modified by	54.25–7.
UCS–57, UNF–57, UHA–33, and UHT–57 modified by	54.25–8.
UCS–65 through UCS–67 replaced by	54.25–10.
UHA–23(b) and UHA–51 modified by	54.25–15.
UHT–5(c), UHT–6, and UHT–23 modified by	54.25–20.
UHT–82 modified by	54.25–20 and 54.25–25.
Appendix 3 modified by	54.15–3.

¹ The references to specific provisions in the ASME Code are coded. The first letter “U” refers to division 1 of section VIII. The second letter, such as “G,” refers to a subsection within section VIII. The number refers to the paragraph within the subsection.

* * * * * 18. In § 54.01–5, revise Table § 54.01– § 54.01–5 Scope (modifies U–1 and U–2).
5(b) to read as follows: * * * * *

TABLE 54.01–5(B)—PRESSURE VESSEL CLASSIFICATION

[NOTE TO TABLE 54.01–5(B): All Classes of pressure vessels are subject to shop inspection and plan approval.]⁴

Class	Service contents	Class limits on pressure and temperature	Joint requirements ^{1 6 7}	Radiography requirements, section VIII, ASME Code ^{3 7}	Post-weld heat treatment requirements ^{5 7}
I	(a) Vapor or gas	Vapor or gas: Over 600 p.s.i. or 700 °F. Liquid: Over 600 p.s.i. or 400 °F.	(1) For category A; (1) or (2) for category B. All categories C and D must have full penetration welds extending through the entire thickness of the vessel wall or nozzle wall.	Full on all butt joints regardless of thickness. Exceptions listed in Table UCS–57 of ASME Code do not apply.	For carbon- or low-alloy steel, in accordance with Table UCS–56, regardless of thickness. For other materials, in accordance with section VIII, ASME Code.
I–L Low Temperature.	(a) Vapor or gas, or liquid	Over 250 p.s.i. and service temp. below 0 °F.	(1) For categories A and B. All categories C and D must have full penetration welds extending through the entire thickness of the vessel wall or nozzle wall. No backing rings or strips left in place.	Full on all butt joints regardless of thickness. Exceptions listed in Table UCS–57 of ASME Code do not apply.	For carbon- or low-alloy steel, in accordance with Table UCS–56, regardless of thickness. For other materials, in accordance with section VIII, ASME Code.

TABLE 54.01-5(B)—PRESSURE VESSEL CLASSIFICATION—Continued

[NOTE TO TABLE 54.01-5(B): All Classes of pressure vessels are subject to shop inspection and plan approval.]⁴

Class	Service contents	Class limits on pressure and temperature	Joint requirements ^{1 6 7}	Radiography requirements, section VIII, ASME Code ^{3 7}	Post-weld heat treatment requirements ^{5 7}
II	(a) Vapor or gas (b) Liquid (c) Hazardous Materials ^{2 3 6} ...	Vapor or gas: 30 through 600 p.s.i. or 275 through 700 °F. Liquid: 200 through 600 p.s.i. or 250 through 400 °F.	(1) or (2) For category A. (1), (2), or (3) for category B. Categories C and D in accordance with UW-16 of ASME Code.	Spot, unless exempted by UW-11(c) of ASME Code.	In accordance with section VIII, ASME Code.
II-L Low Temperature.	(a) Vapor or gas, or liquid (b) Hazardous Materials ²	0 through 250 p.s.i. and service temp. below 0 °F.	(1) For category A; (1) or (2) for category B. All categories C and D must have full-penetration welds extending through the entire thickness of the vessel wall or nozzle wall.	Spot. The exemption of UW-11(c) of ASME Code does not apply.	Same as for I-L except that mechanical stress relief may be substituted if allowed under Subpart 54.30 of this chapter.
III	(a) Vapor or gas (b) Liquid (c) Hazardous Materials ^{2 3 6} ...	Vapor or gas: Under 30 p.s.i. and 0 through 275 °F. Liquid: Under 200 p.s.i. and 0 through 250 °F.	In accordance with Section VIII of ASME Code.	Spot, unless exempted by UW-11(c) of ASME Code.	In accordance with section VIII, ASME Code.

¹ Welded joint categories are defined under UW-3 of the ASME Code. Joint types are described in Table UW-12 of the ASME Code, and numbered (1), (2), etc.

² See § 54.20-2.

³ See §§ 54.25-8(c) and 54.25-10(d).

⁴ See §§ 54.01-15 and 54.10-3 for exemptions.

⁵ Specific requirements modifying Table UCS-56 of the ASME Code appear in § 54.25-7.

⁶ See § 54.20-3(c) and (f).

⁷ Applies only to welded pressure vessels.

19. In § 54.01-10, revise the section heading to read as follows:

§ 54.01-10 Steam-generating pressure vessels (modifies U-1(g)).

20. In § 54.01-15, revise the section heading, and paragraphs (a)(1), (a)(2)(i) thru (iv), (a)(3)(i), and (a)(5) to read as follows:

§ 54.01-15 Exemptions from shop inspection and plan approval (modifies U-1(c)(2)).

(a) * * *

(1) Vessels containing water at a pressure not greater than 689 kPa (100 pounds per square inch gage, psig) and at a temperature not above 93 °C (200

°F) including those containing air, the compression of which serves only as a cushion. Air-charging lines may be permanently attached if the air pressure does not exceed 103 kPa (15 psig).

(2) * * *

(i) A heat input of 58 kW (200,000 B.t.u. per hour);

(ii) A water temperature of 93 °C (200 °F);

(iii) A nominal water-containing capacity of 454 liters (120 gallons); or

(iv) A pressure of 689 kPa (100 psig).

* * * * *

(3)(i) Vessels having an internal operating pressure not exceeding 103

kPa (15 psig) with no limitation on size. (See UG-28(f) of the ASME Code.)

* * * * *

(5) Condensers and heat exchangers, regardless of size, when the design is such that the liquid phase is not greater than 689 kPa (100 psig) and 200 °F (93 °C) and the vapor phase is not greater than 103 kPa (15 psig) provided that the OCMI is satisfied that system over-pressure conditions are addressed by the owner or operator.

* * * * *

21. In § 54.10-5, revise paragraph (a), and Table 54.10-5 to read as follows:

§ 54.10-5 Maximum allowable working pressure (reproduces UG-98).

(a) The maximum allowable working pressure for a vessel is the maximum pressure permissible at the top of the vessel in its normal operating position

at the designated coincident temperature specified for that pressure. It is the least of the values found for maximum allowable working pressure for any of the essential parts of the vessel by the principles given in

paragraph (b) of this section and adjusted for any difference in static head that may exist between the part considered and the top of the vessel. (See appendix 3 of the ASME Code.)
* * * * *

TABLE 54.10-5.—PICTORIAL INTER-RELATION AMONG VARIOUS PRESSURE LEVELS WITH REFERENCES TO SPECIFIC REQUIREMENTS¹

Pressure differential ²	Test pressures	Relief device pressure settings	Pressures upon which flow capacity of relief devices is based
Increasing Pressure	Burst-proof test (UG-101(m) of ASME Code). Yield-proof test (UG-101(j) of ASME Code). Standard hydrostatic test (UG-99 of ASME Code).	.....	Fire exposure, 120% MAWP.
	Pneumatic test (UG-100 of ASME Code). Maximum allowable working pressure (MAWP), UG-98 of ASME Code.	Rupture disk burst (§ 54.15-13). Maximum allowable working pressure (MAWP), UG-98 of ASME Code.	Normal, 110% MAWP. Maximum allowable working pressure (MAWP), UG-98 of ASME Code.
Increasing Pressure	Design pressure, UG-21 and Appendix 3 of ASME Code. Operating Pressure (Appendix 3 of ASME Code).	Design pressure, UG-21 and Appendix 3 of ASME Code. Safety or relief valve setting (UG-133 of ASME Code). Operating Pressure (Appendix 3 of ASME Code).	Design pressure, UG-21 and Appendix 3 of ASME Code. Operating Pressure (Appendix 3 of ASME Code).

¹ For basic pressure definitions see § 52.01-3(g) of this subchapter.

² For pressure differentials above 3,000 pounds per square inch (p.s.i.), special requirements may apply. Arrow of increasing pressure in left column signifies that, for example, the standard hydrostatic-test pressure is higher than the MAWP, which in turn is higher than the design pressure and the operating pressure, and so forth.

22. In § 54.10-10, in paragraph (b), revise the first sentence to read as follows:

§ 54.10-10 Standard hydrostatic test (modifies UG-99).

* * * * *

(b) The hydrostatic-test pressure must be at least one and three-tenths (1.30) times the maximum allowable working pressure stamped on the pressure vessel, multiplied by the ratio of the stress value "S" at the test temperature to the stress value "S" at the design temperature for the materials of which the pressure vessel is constructed.

* * *

* * * * *

§ 54.10-15 [Amended]

23. In § 54.10-15(c), remove the words "1.25 times" wherever they appear and add, in their place, the words "one and one-tenth (1.10) times".

24. Revise § 54.10-20(a)(6) to read as follows:

§ 54.10-20 Marking and stamping.

(a) * * *

(6) Minimum design metal temperature, if below -18 °C (0 °F).

* * * * *

25. In § 54.15-1, revise the section heading and paragraph (a) to read as follows:

§ 54.15-1 General (modifies UG-125 through UG-137).

(a) All pressure vessels built in accordance with applicable requirements in Division 1 of section VIII of the ASME Code must be provided with protective devices as indicated in UG-125 through UG-137 except as noted otherwise in this subpart.

* * * * *

26. In § 54.15-3, revise the section heading to read as follows:

§ 54.15-3 Definitions (modify Appendix 3).

§ 54.15-25 [Revised]

27. In § 54.15-25(c), remove the terms "0°C and 1.03 kp/cm²" and add, in their place, the terms "15°C and 103 kPa".

28. Revise § 54.25-3 to read as follows:

§ 54.25-3 Steel plates (modifies UCS-6).

The steels listed in UCS-6(b) of the ASME Code will be allowed only in

Class III pressure vessels (see Table 54.01-5(b)).

29. Revise § 54.25-5 to read as follows:

§ 54.25-5 Corrosion allowance.

The corrosion allowance must be as required in § 54.01-35.

30. Revise § 54.25-15(b) to read as follows:

§ 54.25-15 Low-temperature operation—high-alloy steels (modifies UHA-23(b) and UHA-51).

* * * * *

(b) Materials for pressure vessels with service temperatures below -320 °F (-195 °C) must be of the stabilized or low carbon (less than 0.10 percent) austenitic stainless steel type, produced according to the applicable specifications of Table UHA-23 of the ASME Code. These materials and their weldments must be tested for toughness according to the requirements of Subpart 54.05 except that the acceptance criteria for Charpy V-notch testing must be in accordance with UHT-6(a)(4) of the ASME Code.

* * * * *

31. Revise § 54.25-20(c), to read as follows:

§ 54.25–20 Low temperature operation—ferritic steels with properties enhanced by heat treatment (modifies UHT–5(c), UHT–6, UHT–23, and UHT–82).

* * * * *

(c) The qualification of welding procedures, welders and weld-production testing for the steels of Table 54.25–20(a) must conform to the requirements of part 57 of this subchapter and to those of Subpart 54.05 of this part except that the acceptance criteria for Charpy V-notch testing must be in accordance with UHT–6(a)(4) of the ASME Code.

* * * * *

32. Revise § 54.25–25(a) to read as follows:

§ 54.25–25 Welding of quenched and tempered steels (modifies UHT–82).

(a) The qualification of welding procedures, welders, and weld-

production testing must conform to the requirements of Part 57 of this subchapter. The requirements of § 57.03–1(d) of this subchapter apply to welded pressure vessels and non-pressure vessel type tanks of quenched and tempered steels other than 9-percent nickel.

* * * * *

PART 56—PIPING SYSTEMS AND APPURTENANCES

33. Revise the authority citation for part 56 to read as follows:

Authority: 33 U.S.C. 1321(j), 1509; 43 U.S.C. 1333; 46 U.S.C. 3306, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; Department of Homeland Security Delegation No. 0170.1.

Subpart 56.01 [Amended]

34. In Subpart 56.01, remove the Note in its entirety.

35. In § 56.01–2, in paragraph (b), revise the entries for “American National Standards Institute (ANSI)”, “American Society of Mechanical Engineers (ASME)”, “Manufacturers Standardization Society of the Valve and Fitting Industry, Inc. (MSS)”, and “Society of Automotive Engineers (SAE)”, and add, in alphabetical order, the entries “American Petroleum Institute (API)”, “Instrument Society of America (ISA)”, and “International Organization for Standardization (ISO)”, to read as follows:

§ 56.01–2 Incorporation by reference.

* * * * *

(b) * * *

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), 25 West 43rd Street, New York, NY 10036

- ANSI B1.20.1–83 (Reaffirmed 2001) Pipe Threads, General Purpose (Inch)
ANSI B1.20.3–76 (Reaffirmed 1998) Dryseal Threads (Inch)
ANSI B16.5–96 Pipe Flanges and Flanged Fittings
ANSI B16.15–85 (Reaffirmed 1994) Cast Bronze Threaded Fittings, Classes 125 and 250
ANSI B16.18–84 (Reaffirmed 1994) Cast Copper Alloy Solder Joint Pressure Fittings
ANSI B16.20–00 Metallic Gaskets for Pipe Flanges—Ring-Joint, Spiral-Wound, and Jacketed.
ANSI B16.24–91 (Reaffirmed 1998) Bronze Pipe Flanges and Flanged Fittings, Class 150 and 300.
ANSI B16.25–97 Buttwelding Ends
ANSI B16.28–94 Wrought Steel Buttwelding Short Radius Elbows and Returns
ANSI B16.29–94 Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings DWV.
ANSI B16.34–96 Valves—Flanged, Threaded and Welding End
ANSI B18.2.1–96 Square and Hex Bolts and Screws, Inch Series
ANSI B18.2.2–87 (Reaffirmed 1999) Square and Hex Nuts
ANSI B36.19M–85 (Reaffirmed 1994) Stainless Steel Pipe

- 56.60–1
56.60–1
56.25–20; 56.30–10; 56.60–1
56.60–1
56.60–1
56.60–1
56.60–1
56.60–1
56.60–1; 56.30–5; 56.70–10
56.60–1
56.60–1
56.20–1; 56.60–1
56.25–20; 56.60–1
56.25–20; 56.60–1
56.07–5; 56.60–1.

AMERICAN PETROLEUM INSTITUTE (API), 1220 L Street NW., Washington, DC 20005–4070

API Standard 607, Fire Test for Soft-Seated Quarter-Turn Valves, Fourth Edition, 1993

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME), INTERNATIONAL, Three Park Avenue, New York, NY 10016–5990

- Boiler and Pressure Vessel Code:
Section I, Power Boilers, 2001
Section VIII, Division 1, Pressure Vessels, 2001
Section IX, Welding and Brazing Qualifications, 1986, with addenda
ASME B1.1–89 (Reaffirmed 2001) Unified Inch Screw Threads (UN and UNR Thread Form).
ASME B16.1–98 Cast Iron Flanges and Flanged Fittings, Classes 25, 125, 250, and 800
ASME B16.3–99 Malleable Iron Threaded Fittings, Classes 150 and 300
ASME B16.4–98 Cast Iron Threaded Fittings, Classes 125 and 250
ASME B16.9–01 Factory-Made Wrought Steel Buttwelding Fittings
ASME B16.10–00 Face-to-Face and End-to-End Dimensions of Ferrous Valves
ASME B16.11–01 Forged Steel Fittings, Socket-Welding and Threaded
ASME B16.14–91 Ferrous Pipe Plugs, Bushings, and Locknuts with Pipe Threads
ASME B16.42–98 Ductile Iron Pipe Flanges and Flanged Fittings, Classes 150 and 300
ASME B31.1–2001 Power Piping
ASME B36.10M–2001 Welded and Seamless Wrought Steel Pipe

- 56.20–15
56.15–5; 56.15–10; 56.60–1; 56.60–1; 56.70–15; 56.95–10; 56.15–1
56.15–1; 56.15–5; 56.15–10; 56.25–5; 56.30–10; 56.30–30; 56.60–15; 56.60–1; 56.95–10
56.70–5; 56.70–20; 56.75–20; 56.85–10
56.60–1; 56.25–20
56.60–1; 56.60–10
56.60–1
56.60–1
56.60–1
56.60–1
56.30–5; 56.60–1
56.60–1
56.60–1
56.01–5
56.07–5; 56.30–20; 56.60–1

* * * * *

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO), Case Postal 56, CH–1211 Geneva 20 Switzerland

ISO 15540 (1999) Ships and marine technology—Fire resistance of hose assemblies—test methods.

INSTRUMENT SOCIETY OF AMERICA (ISA), 67 Alexander Drive, Research Triangle Park, NC 27709.

* * * * *

56.60–25

ISA-S75.02 Control Valve Capacity Test Procedures, 1996	56.20-15
<i>MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, INC. (MSS), 127 Park Street NE, Vienna, VA 22180</i>	
SP-6-01 Standard Finishes for Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings.	56.25-10; 56.60-1
SP-9-01 Spot Facing for Bronze, Iron and Steel Flanges	56.60-1
SP-25-98 Standard Marking System for Valves, Fittings, Flanges and Unions	56.15-1; 56.20-5; 56.60-1
SP-44-96 Steel Pipe Line Flanges	56.60-1
SP-45-98 Bypass and Drain Connection Standard	56.20-20; 56.60-1
SP-51-00 Class 150LW Corrosion Resistant Cast Flanges and Flanged Fittings	56.60-1
SP-53-99 Quality Standard for Steel Castings and Forgings for Valves, Flanges and Fittings and Other Piping Components—Magnetic Particle Examination Method.	56.60-1
SP-55-01 Quality Standard for Steel Castings for Valves, Flanges and Fittings and Other Piping Components—Visual Method.	56.60-1
SP-58-93 Pipe Hangers and Supports—Materials, Design and Manufacture	56.60-1
SP-61-99 Pressure Testing of Steel Valves	56.60-1
SP-67-95 Butterfly Valves	56.60-1
SP-69-96 Pipe Hangers and Supports—Selection and Application	56.60-1
SP-72-99 Ball Valves with Flanged or Butt-Welding Ends for General Service	56.60-1
SP-73-91 (R 96) Brazing Joints for Wrought and Cast Copper Alloy Solder Joint Pressure Fittings.	56.60-1
SP-83-92 Steel Pipe Unions, Socket-Welding and Threaded	56.60-1
<i>SOCIETY OF AUTOMOTIVE ENGINEERS (SAE), 400 Commonwealth Drive, Warrendale, PA 15096</i>	
J1475-96 Hydraulic Hose Fittings for Marine Applications	56.60-25
J1942-97 Hose and Hose Assemblies for Marine Applications	56.60-25

36. In § 56.01-3, revise the section heading and paragraph (b) to read as follows:

§ 56.01-3 Power boilers, external piping and appurtenances (Replaces 100.1.1, 100.1.2, 122.1, 132 and 133).

* * * * *

(b) Specific requirements for external piping and appurtenances of power boilers, as defined in §§ 100.1.1 and 100.1.2, appearing in the various paragraphs of ASME-B31.1, are not

adopted unless specifically indicated elsewhere in this part.

37. In § 56.01-5, revise the section heading, paragraphs (a), (b), (c), and Table 56.01-5(a), to read as follows:

§ 56.01-5 Adoption of Code B31.1 of the American Society of Mechanical Engineers (ASME) for power piping, and other standards.

(a) Piping systems for ships and barges must be designed, constructed, and inspected in accordance with Code

B31.1, "Power Piping", of ASME, as limited, modified, or replaced by specific requirements in this part. The provisions in the appendices to Code B31.1 are adopted and must be followed when the requirements of Code B31.1 or the rules in this part make them mandatory. For general information, Table 56.01-5(a) lists the various paragraphs and sections in Code B31.1 that are limited, modified, replaced, or reproduced by rules in this part.

TABLE 56.01-5(a).—LIMITATIONS AND MODIFICATIONS IN THE ADOPTION OF CODE B31.1 OF ASME FOR PRESSURE AND POWER PIPING

Section or paragraph in ASME-B31.1, and disposition	Unit in this part
100.1 replaced by	56.01-1
100.2 modified by	56.07-5
101 through 104.7 modified by	56.07-10
101.2 modified by	56.07-10(a), (b)
101.5 replaced by	56.07-10(c)
102.2 modified by	56.07-10(d)
102.3 and 104.1.2 modified by	56.07-10(e)
104.3 modified by	56.07-10(f)
104.4 modified by	56.07-10(e)
104.5.1 modified by	56.30-10
105 through 108 replaced by	56.10-1 through 56.25-20
110 through 118 replaced by	56.30-1 through 56.30-35
119.5.1 replaced by	56.35-10, 56.35-15
119.7 replaced by	56.35-1
122.1.4 replaced by	56.50-40
122.3 modified by	56.50-97
122.6 through 122.10 replaced by	56.50-1 through 56.50-80
123 replaced by	56.60-1
Table 126.1 is replaced by	56.30-5(c)(3), 56.60-1
127 through 135 replaced by	56.65-1, 56.70-10 through 56.90-10
136 replaced by	56.95-1 through 56.95-10
137 replaced by	56.97-1 through 56.97-40

(b) When a section or paragraph of the regulations in this part relates to

material in Code B31.1 of ASME (ASME-B31.1), the relationship with

Code will appear immediately after the

heading of the section or at the beginning of the paragraph as follows:

(1) (Modifies _____.) This indicates that the material in ASME-B31.1 so numbered for identification is generally applicable but is being altered, amplified, or augmented.

(2) (Replaces _____.) This indicates that the material in ASME-B31.1 so numbered for identification does not apply.

(3) (Reproduces _____.) This indicates that the material in ASME-B31.1 so numbered for identification is being identically reproduced for convenience, not for emphasis.

(c) As stated in § 56.01-2 of this chapter, the standards of the American National Standards Institute (ANSI) and the ASME specifically referred to in this part must be the governing requirements for the matters covered unless specifically limited, modified, or replaced by other rules in this subchapter. See § 56.60-1(b) of this part for the other adopted commercial standards applicable to piping systems that also constitute this subchapter.

38. In § 56.07-5, revise paragraph (a) introductory text, and revise paragraph (f) to read as follows:

§ 56.07-5 Definitions (modifies 100.2).

(a) *Piping.* The definitions contained in 100.2 of ASME-B31.1 apply, as well as the following:

* * * * *

(f) *Vital systems.*

(1) 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:

- (i) Systems for fill, transfer, and service of fuel oil;
- (ii) Fire-main systems;
- (iii) Fixed gaseous fire-extinguishing systems;
- (iv) Bilge systems;
- (v) Ballast systems;
- (vi) Steering systems and steering-control systems;
- (vii) Propulsion systems and their necessary auxiliaries and control systems;
- (viii) Ship's service and emergency electrical-generation systems and their auxiliaries vital to the vessel's survivability and safety;
- (ix) 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.

(2) For the purpose of this subchapter, a system not identified by paragraph (1) of this section is a non-vital system.

* * * * *

39. In § 56.07-10—

a. In paragraph (a), revise the introductory text and paragraph (a)(1) to read as set out below;

b. In paragraph (b), revise the introductory text to read as set out below;

c. In paragraph (d), revise the introductory text and paragraph (d)(1) to read as set out below;

d. In paragraph (e), revise the introductory text and paragraph (e)(1) to read as set out below; and

e. In paragraph (f), revise the introductory text to read as follows:

§ 56.07-10 Design conditions and criteria (modifies 101-104.7).

(a) *Maximum allowable working pressure.* (1) The maximum allowable working pressure of a piping system must not be greater than the internal design pressure defined in 104.1.2 of ASME-B31.1.

* * * * *

(b) *Relief valves.*

* * * * *

(d) *Ratings for pressure and temperature (modifies 102.2).* The material in 102.2 of ASME-B31.1 applies, with the following exceptions:

(1) The details of components not having specific ratings as described in 102.2.2 of ASME-B31.1 must be furnished to the Marine Safety Center for approval.

* * * * *

(e) *Pressure design (modifies 102.3, 104.1.2, and 104.4).* (1) Materials for use in piping must be selected as described in § 56.60-1(a) of this part. Tabulated values of allowable stress for these materials must be measured as indicated in 102.3.1 of Code B31.1 of ASME and in tables 56.60-1 and 56.60-2(a) of this part.

* * * * *

(f) *Intersections (modifies 104.3).* The material in 104.3 of ASME-B31.1 is applicable with the following additions:

* * * * *

40. Revise § 56.10-1(b), to read as follows:

§ 56.10-1 Selection and limitations of piping components (replaces 105 through 108).

* * * * *

(b) You must meet the requirements in this subpart and in subparts 56.15 through 56.25 instead of those in 105 through 108 in ASME-B31.1; however, certain requirements are marked "reproduced."

41. In § 56.10-5, redesignate paragraphs (c)(2-a) through (5) as (c)(3) through (6) respectively, and revise newly designated paragraphs (c)(3) and (c)(6) to read as follows:

§ 56.10-5 Pipe.

* * * * *

(c) * * *

(3) Copper-nickel alloys may be used for water and steam service within the design limits of stress and temperature indicated in ASME-B31.1.

* * * * *

(6) Aluminum-alloy pipe or tube may be used within the limitation stated in 124.7 of ASME-B31.1 and paragraph (5) of this section.

* * * * *

§ 56.15-1 [Amended]

42. In § 56.15-1(c)(2)(i), remove the text "ANSI B31.1" and add, in its place, the text "ASME-B31.1".

§ 56.15-5 [Amended]

43. In § 56.15-5(c)(2)(ii)(A), remove the text "ANSI B31.1" and add, in its place, the text "ASME-B31.1".

§ 56.20-1 [Amended]

44. In § 56.20-1(c)(2)(i), remove the text "ANSI B31.1" and add, in its place, the text "ASME-B31.1".

45. In § 56.20-5, revise the section heading to read as follows:

§ 56.20-5 Marking (modifies 107.2).

46. Revise § 56.20-9(a) to read as follows:

§ 56.20-9 Valve construction.

(a) Each valve must close with a right-hand (clockwise) motion of the handwheel or operating lever as seen by one facing the end of the valve stem. Each gate, globe, and angle valve must generally be of the rising-stem type, preferably with the stem threads external to the valve body. Where operating conditions will not permit such installations, the use of a nonrising-stem valve will be acceptable. Each nonrising-stem valve, lever-operated valve, or other valve where, because of design, the position of the disc or closure mechanism is not obvious must be fitted with an indicator to show whether the valve is opened or closed, except as provided for in § 56.50-1(g)(2)(iii) of this part. No such indicator is required for any valve located in a tank or similar inaccessible space when indicators are available at accessible sites. The operating levers of each quarter-turn (rotary) valve must be parallel to the fluid flow when open and perpendicular to the fluid flow when closed.

* * * * *

47. Revise § 56.20-15(c) to read as follows:

§ 56.20-15 Valves employing resilient material.

* * * * *

(c) If a valve designer elects to use either a calculation or actual fire testing instead of material removal and pressure testing, the calculation must employ ANSI/ISA-S75.02 to determine the flow coefficient (C_v), or the fire testing must be conducted in accordance with Standard 607 of the American Petroleum Institute.

48. In § 56.25-5, revise the first sentence to read as follows:

§ 56.25-5 Flanges.

Each flange must conform to the design requirements either of the applicable standards of Table 56.60-1(b) of this part, or of those of Appendix 2 of section VIII of the ASME Code. * * *

49. Revise § 56.25-7 to read as follows:

§ 56.25-7 Blanks.

Each blank must conform to the design requirements of 104.5.3 of ASME-B31.1.

50. In § 56.25-15, revise the section heading, redesignate paragraphs (b) and (c) as paragraphs (c) and (d) respectively, and add new paragraph (b) to read as follows:

§ 56.25-15 Gaskets (modifies 108.4).

* * * * *

(b) Each gasket must conform to the design requirements of the applicable standards of Table 56.60-1(b) of this part.

* * * * *

51. In § 56.25-20, revise paragraphs (d) and (e) to read as follows:

§ 56.25-20 Bolting.

* * * * *

(d) All alloy bolts or studs and accompanying nuts are to be threaded in accordance with ASME-B1.1, Class 2A external threads, and Class 2B internal threads (8-thread series 8UN for one inch and larger).

(e) (Reproduces 108.5.1) Washers, when used under nuts, must be of forged or rolled material with steel washers being used under steel nuts and bronze washers under bronze nuts.

52. Revise § 56.30-1 to read as follows:

§ 56.30-1 Scope (replaces 110 through 118).

The selection and limitation of piping joints must be as required by this subpart rather than as required by 110 through 118 of ASME-B31.1; however, certain requirements are marked "reproduced" in this subpart.

53. In § 56.30-5, revise paragraphs (c)(1), (c)(3) and (d) to read as follows:

§ 56.30-5 Welded joints.

* * * * *

(c) * * *

(1) Each socket weld must conform to ASME B16.11, to applicable standards listed in Table 56.60-1(b) of this part, and to Figure 127.4.4C in ASME-B31.1 as modified by § 56.30-10(b)(4) of this part. A gap of approximately one-sixteenth inch between the end of the pipe and the bottom of the socket must be provided before welding. This may best be provided by bottoming the pipe and backing off slightly before tacking.

* * * * *

(3) (Reproduces 111.3.4.) Drains and bypasses may be attached to a fitting or valve by socket welding provided the socket depth, bore diameter and shoulder thickness conform to ASME-B16.11.

(d) *Fillet welds.* A fillet weld may vary from convex to concave. The size of a fillet weld is determined as shown in Figure 127.4.4A of ASME-B31.1. Fillet-weld details for socket-welding components must meet § 56.30-5(c). Fillet-weld details for flanges must meet § 56.30-10 of this part (see also § 56.70-15(d)(3) and (4) of this part for applications of fillet welds).

* * * * *

54. Revise § 56.30-10(b)(3) to read as follows:

§ 56.30-10 Flanged joints (modifies 104.5.1(a)).

* * * * *

(b) * * *

(3) *Figure 56.30-10(b), Method 3.* Slip on flanges meeting ASME B16.5 may be used in piping systems of Class I, Class II, or Class II-L not to exceed the service pressure-temperature ratings for flanges of class 300 and lower, within the temperature limitations of the material selected for use, and not to exceed 4-inch Nominal Pipe Size (NPS) in systems of Class I and Class II-L. If 100-percent radiography is required by § 56.95-10 of this part for the class, diameter, wall thickness, and material of the pipe being joined, then slip-on flanges are not permitted and butt-welding flanges are required. The configuration in Figure 127.4.4B(b) of ASME-B31.1, using a face and backweld, may be preferable where eliminating void spaces is desirable. For systems of Class II, the size of the strength fillet may be limited to a maximum of 0.525 inch instead of 1.4T, and the distance from the face of the flange to the end of the pipe may be a maximum of three-eighths inch. Restrictions on the use of slip-on flanges appear in § 56.50-105 of this part for low-temperature piping systems.

* * * * *

55. Revise § 56.30-20(d) to read as follows:

§ 56.30-20 Threaded joints.

* * * * *

(d) No pipe with a wall thickness less than that of standard weight of ANSI or ASME B36.10 steel pipe may be threaded regardless of service. For restrictions on the use of pipe in steam service more than 250 pounds per square inch or water service over 100 pounds per square inch and 200 °F (93 °C), see part 104.1.2(c)(1) of ASME-B31.1. Restrictions on the use of threaded joints apply for low-temperature piping and must be checked when designing for these systems.

56. Revise § 56.35-1(b) to read as follows:

§ 56.35-1 Pipe-stress calculations (replaces 119.7).

* * * * *

(b) The Marine Safety Center (MSC) will give special consideration to the use of the full tabulated value of "S" in computing S_n and S_c where all material used in the system is subjected to further nondestructive testing specified by the MSC, and where the calculations prescribed in 119.6.4 and 102.3.2 of ASME-B31.1 and § 56.07-10 are performed. The procedures for nondestructive testing and the method of stress analysis must be approved by the MSC before the submission of computations and drawings for approval.

57. In § 56.50-1, revise the section heading and the introductory text to read as follows:

§ 56.50-1 General (replaces 122).

The requirements in this subpart for piping systems apply instead of those in section 122 of ASME-B31.1. Installation requirements applicable to all systems:

* * * * *

58. Revise § 56.50-10(a) to read as follows:

§ 56.50-10 Special gaging requirements.

(a) Where pressure-reducing valves are employed, a pressure gage must be provided on the low-pressure side of the reducing station.

* * * * *

59. In § 56.50-15, in paragraph (b), remove the text, "ANSI-B31.1" and add, in its place, the text "ASME-B31.1", and revise paragraph (f) to read as follows:

§ 56.50-15 Steam and exhaust piping.

* * * * *

(f) The auxiliary steam piping of each vessel equipped with more than one boiler must be so arranged that steam for the whistle and other vital auxiliary systems, such as the electrical-

generation plant, may be supplied from any power boiler.

* * * * *

60. Revise § 56.50–30(b)(1) to read as follows:

§ 56.50–30 Boiler feed piping.

* * * * *

(b) * * *

(1) Stop and stop-check valves must be fitted in the main feed line and must be attached as close as possible to drum inlets or to the economizer inlet on boilers fitted with integral economizers.

* * * * *

61. In § 56.50–40, revise the section heading and paragraph (a)(1) to read as follows:

§ 56.50–40 Blowoff piping (replaces 122.1.4).

(a)(1) The owner or operator of a vessel must follow the requirements for blowoff piping in this section instead of the requirements in 122.1.4 of ASME–B31.1.

* * * * *

§ 56.50–65 [Amended]

62. In § 56.50–65(a), remove the text “ANSI–B31.1” and add, in its place, the text “ASME–B31.1”.

63. In § 56.50–70, revise paragraphs (a)(2) and (b)(2) to read as follows:

§ 56.50–70 Gasoline fuel systems.

(a) * * *

(2) Thicknesses of tubing walls must not be less than the larger of that shown in Table 56.50–70(a) or that required by § 56.07–10(e) of this part and 104.1.2 of ASME–B31.1.

* * * * *

(b) * * *

(2) Either a short length of suitable metallic or nonmetallic flexible tubing or hose or a loop of annealed copper tubing must be installed in the fuel-supply line at or near the engine to prevent damage by vibration.

(i) If nonmetallic flexible hose is used, it must meet the requirements of § 56.60–25(b) of this part for fuel service.

(ii) Flexible hose connections should maintain metallic contact between the

sections of the fuel-supply lines; however, if they do not, the fuel tank must be grounded.

* * * * *

64. In § 56.50–97, revise the section heading and the introductory text to paragraph (a) to read as follows:

§ 56.50–97 Piping for instruments, control, and sampling (modifies 122.3).

(a) Piping for instruments, control, and sampling must comply with paragraph 122.3 of ASME–B31.1 except that:

* * * * *

65. In § 56.60–1, in paragraphs (a)(1) and (a)(2), and Table 56.60–1(a), remove the terms “ANSI–B31.1” and “ANSI B31.1” wherever they appear and add, in their place, the term “ASME–B31.1”; and revise Table 56.60–1(b) to read as follows:

§ 56.60–1 Acceptable materials and specifications (replaces 123 and Table 126.1 in ASME–B31.1).

* * * * *

TABLE 56.60–1(b).— ADOPTED STANDARDS APPLICABLE TO PIPING SYSTEMS
[Replaces Table 126.1]

ANSI Standards (American National Standards Institute), 11 West 42nd Street, New York, NY 10036

B1.20.1	Pipe Threads, General Purpose.
B1.20.3	Dryseal Pipe Threads.
B2.1	Pipe Threads.
B2.2	[Reserved]
B16.5	Steel-Pipe Flanges and Flanged Fittings. ³
B16.14	Ferrous-Threaded Plugs, Bushings, and Locknuts.
B16.15	Cast-Bronze Threaded Fittings—Classes 125 & 250.
B16.18	Cast-Copper-Alloy Solder Joints. ⁴
B16.20	Ring Joint Gaskets-Steel Flanges.
B16.21	Non-metallic Gaskets for Flanges.
B16.22	Wrought-Copper and Copper-Alloy Solder-Joint Fittings. ⁴
B16.23	Cast-Copper-Alloy Solder-Joint Drainage Fittings. ⁴
B16.24	Bronze-Pipe Flanges and Flanged Fittings—Class 150 and 300. ³
B16.25	Butt-Welding Ends—Pipe, Valves, Flanges, & Fittings.
B16.28	Wrought-Steel Butt-welding Short-Radius Elbows and Returns. ⁴
B16.29	Wrought-Copper and Wrought-Copper-Alloy Solder-Joint Drainage Fittings. ⁴
B16.34	Valves—Flanged, Threaded, and Welding End. ³
B18.2	[Reserved]
B18.2.1	Square and Hex Bolts and Screws, Inch Series.
B18.2.2	Square and Hex Nuts.
B36.19	Stainless-Steel Pipe.

ASME Standards (American Society of Mechanical Engineers) Three Park Avenue, New York, NY 10016–5990

ASME B1.1–89 (Reaffirmed 2001).	Unified Inch Screw Threads.
ASME B16.1–98	Cast-Iron Flanges and Flanged Fittings, Classes 25, 125, 250, and 800.
ASME B16.3–99	Malleable-Iron Threaded Fittings, Classes 150 and 300.
ASME B16.4–98	Cast-Iron Threaded Fittings, Classes 125 and 250.
ASME B16.9–01	Factory-Made Wrought-Steel Butt-welding Fittings.
ASME B16.10–00	Face-to-Face and End-to-End Dimensions of Ferrous Valves.
ASME B16.11–01	Forged-Steel Fittings, Socket-Welding and Threaded.
ASME B16.14–91	Ferrous-Pipe Plugs, Bushings, and Locknuts with Pipe Threads.
ASME B16.42–98	Ductile-Iron Pipe Flanges and Flanged Fittings, Classes 150 and 300.
ASME B31.1–2001	Power Piping.
ASME B36.10M–00	Welded and Seamless Wrought-Steel Pipe.

TABLE 56.60-1(b).— ADOPTED STANDARDS APPLICABLE TO PIPING SYSTEMS—Continued
[Replaces Table 126.1]

ASTM Standards (American Society for Testing and Materials), 100 Barr Harbor Drive, Conshohocken, PA 19428-2959.

Table with 2 columns: Standard ID (F682, F1006, F1007, F1020, F1120, F1123, F1139, F1172, F1173, F1199, F1200, F1201) and Description (Wrought-Carbon-Steel Sleeve-Type Couplings, Entrapment Separators for Use in Marine Piping Applications, etc.)

EJMA Standards (Expansion Joint Manufacturers Association, Inc.), 25 North Broadway, Tarrytown, NY 10591

Standards of the Expansion Joint Manufacturers Association, Inc.
FCI Standards (Fluid Controls Institute, Inc.), 31 South Street, Suite 303, Morristown, NJ 07960.
FCI 69-1 Pressure-Rating Standard for Steam Traps.

MSS Standards (Manufacturers' Standardization Society of the Valve and Fittings Industry), 1815 North Fort Myer Drive, Arlington, Va. 22209.4

Table with 2 columns: Standard ID (SP-6, SP-9, SP-25, SP-44, SP-45, SP-51, SP-53, SP-55, SP-58, SP-61, SP-66, SP-67, SP-69, SP-72, SP-73, SP-83) and Description (Finishes—On Flanges, Valves, and Fittings, Spot-Facing, Standard Marking System for Valves, Fittings, Flanges, and Unions, etc.)

1 [Reserved]

2 In addition, for bronze valves, adequacy of body shell thickness shall be satisfactory to the Marine Safety Center. Refer to § 56.60-10 of this part for cast-iron valves.

3 Mill or manufacturer's certification is not required, except where a needed portion of the required marking is deleted because of size or is absent because of age of existing stocks.

4 Because this standard offers the option of several materials, some of which are not generally acceptable to the Coast Guard, compliance with the standard does not necessarily indicate compliance with these rules. The marking on the component or the manufacturer or mill certificate must indicate the specification or grade of the materials as necessary to fully identify the materials. The materials must comply with the requirements in this subchapter governing the particular application.

66. Revise § 56.60-3(b) to read as follows:

§ 56.60-3 Ferrous materials.

* * * * *

(b) (Reproduces 124.2.C) No one may use carbon or alloy steel having a carbon content of more than 0.35 percent in welded construction or shape it by oxygen-cutting or other thermal-cutting process.

67. In § 56.60-5, revise paragraphs (a) and (b) to read as follows:

§ 56.60-5 Steel (High-temperature applications).

(a) (Reproduces 124.2.A.) Upon prolonged exposure to temperatures above 775 °F (412 °C), the carbide phase of plain carbon steel, plain nickel-alloy

steel, carbon-manganese-alloy steel, manganese-vanadium-alloy steel, and carbon-silicon steel may convert to graphite.

(b) (Reproduces 124.2.B.) Upon prolonged exposure to temperatures above 875 °F (468 °C), the carbide phase of alloy steels, such as carbon-molybdenum, manganese-molybdenum-vanadium, manganese-chromium-vanadium, and chromium-vanadium, may convert to graphite.

* * * * *

68. In § 56.60-25, revise paragraphs (b)(2) and (b)(3); and add paragraph (b)(6) to read as follows:

§ 56.60-25 Nonmetallic materials.

* * * * *

(b) * * *

(2) Nonmetallic flexible hose may be used in vital fresh- and salt-water systems at a maximum service pressure of 1034 kPa (150 psi). Nonmetallic flexible hose may be used in lengths not exceeding 76 cm (30 inches) where flexibility is required, subject to the limits in paragraphs (a)(1) through (4) of this section. Nonmetallic flexible hose may be used for plastic pipe in duplicate installations in accordance with paragraph (b) of this section.

(3) Nonmetallic flexible hose may be used for plastic pipe in non-vital fresh- and salt-water systems and non-vital pneumatic systems, subject to the limits of paragraphs (a)(1) through (4) of this section. Unreinforced hoses are limited to a maximum service pressure of 345 kPa (50 psi); reinforced hoses are

limited to a maximum service pressure of 1034 kPa (150 psi).

* * * * *

(6) The fire-test procedures of ISO 15540 are an acceptable alternative to those procedures of SAE J1942. All other tests of SAE J1942 are still required.

* * * * *

§ 56.65–1 [Amended]

69. In § 56.65–1, revise the section heading to read as set out below, and in paragraph (a) remove the term “ANSI–B31.1” and add, in its place, the term “ASME–B31.1”:

§ 56.65–1 General (replaces 127 through 135).

70. In § 56.70–10—

a. In paragraph (a), revise the introductory text to read as set out below and, in paragraph (a)(3), remove the text “(see Fig. 127.3.1)” and add, in its place, the text “(see Fig. 127.3)”; and

b. Revise paragraph (b) to read as follows:

§ 56.70–10 Preparation (modifies 127.3).

(a) *Butt welds (reproduces 127.3)–(A.1) End preparation.*

* * * * *

(b) *Fillet welds (modifies 127.4.4).* In making fillet welds, the weld metal must be deposited in such a way as to obtain adequate penetration into the base metal at the root of the weld. Piping components that are to be joined utilizing fillet welds must be prepared in accordance with applicable provisions and requirements of this section. For typical details, see Figures 127.4.4A and 127.4.4C of ASME–B31.1 and Figure 56.30–10(b) of this part. See § 56.30–5(d) of this part for additional requirements.

71. In § 56.70–15—

a. In paragraph (c), (d)(1), and (g)(1) through (7), remove the terms “ANSI–B31.1” and “ANSI B31.1” and add, in their place, the term “ASME–B31.1”;

b. Revise paragraphs (b)(1), (b)(5), and (b)(6) to read as set out below;

c. In paragraph (f), revise the introductory text to read as set out below; and

d. In paragraph (g), revise the introductory text and paragraph (g)(4) to read as follows:

§ 56.70–15 Procedure.

* * * * *

(b) * * *

(1) Girth butt welds must be complete penetration welds and may be made with a single vee, double vee, or other suitable type of groove, with or without backing rings or consumable inserts.

* * * * *

(5) When components of different outside diameters are welded together, the weld joint must be filled to the outside surface of the component having the larger diameter. There must be a gradual transition, not exceeding a slope of 1:3, in the weld between the two surfaces. To avoid unnecessary weld deposit, the outside surface of the component having the larger diameter must be tapered at an angle not to exceed thirty degrees with the axis of the pipe. (See Fig. 127.4.2 of ASME–B31.1)

(6) As-welded surfaces are permitted, however, the surface of the welds must be sufficiently free from coarse ripple, grooves, overlaps, abrupt ridges and valleys to meet the following:

* * * * *

(f) *Weld defect repairs.*

* * * * *

(g) *Welded branch connections.* * * *

* * * * *

(4) Branch connections (including specially made integrally reinforced branch connection fittings) which abut the outside surface of the run wall, or which are inserted through an opening cut in the run wall, shall have opening and branch contour to provide a good fit and shall be attached by means of full penetration groove welds except as otherwise permitted in paragraph (g)(7) of this section. The full penetration groove welds shall be finished with cover fillet welds having a minimum throat dimension not less than 2tc. The limitation as to imperfection of these groove welds shall be as set forth in 127.4.2(C) of ASME–B31.1 for girth welds.

* * * * *

72. Revise § 56.75–5(c) to read as follows:

§ 56.75–5 Filler metal.

* * * * *

(c) Fluxes that are fluid and chemically active at the brazing temperature must be used when necessary to prevent oxidation of the filler metal and of the surfaces to be joined and to promote free flowing of the filler metal.

73. In § 56.75–10, revise the section heading to read as follows:

§ 56.75–10 Joint clearance.

74. In § 56.75–15, revise the section heading to read as follows:

§ 56.75–15 Heating.

75. Revise § 56.75–25(b) to read as follows:

§ 56.75–25 Detail requirements.

* * * * *

(b) The surfaces to be brazed must be clean and free from grease, oxides, paint, scale, and dirt of any kind. Any suitable chemical or mechanical cleaning method may be used to provide a clean, wettable surface for brazing.

* * * * *

§ 56.80–5 [Amended]

76. In § 56.80–5, remove the term “ANSI–B31.1” and add, in its place, the term “ASME–B31.1”.

77. In § 56.80–15, revise paragraphs (a), (c), (d), (e), and (g) to read as follows:

§ 56.80–15 Heat treatment of bends and formed components.

(a) Carbon-steel piping that has been heated to at least 1,650 °F (898 °C) for bending or other forming requires no subsequent heat treatment.

* * * * *

(c) Cold bending and forming of carbon steel having a wall thickness of three-fourths of an inch and heavier, and all ferritic-alloy pipe in nominal pipe sizes of 4 inches and larger, or one-half-inch wall thickness or heavier, will require a stress-relieving treatment.

(d) Cold bending of carbon-steel and ferritic-alloy steel pipe in sizes and wall thicknesses less than specified in 129.3.3 of ASME–B31.1 may be used without a postheat treatment.

(e) For other materials the heat treatment of bends and formed components must be such as to ensure pipe properties that are consistent with the original pipe specification.

* * * * *

(g) Austenitic stainless-steel pipe that has been heated for bending or other forming may be used in the “as-bent” condition unless the design specification requires post-bending heat treatment.

78. Revise § 56.85–5 to read as follows:

§ 56.85–5 Heating and cooling method.

Heat treatment may be accomplished by a suitable heating method that will provide the desired heating and cooling rates, the required metal temperature, metal temperature uniformity, and temperature control.

79. In § 56.85–10, revise paragraphs (b) and (c) to read as follows:

§ 56.85–10 Preheating.

* * * * *

(b) During the welding of dissimilar materials, the minimum preheat temperature may not be lower than either the highest temperature listed in Table 56.85–10 for any of the materials to be welded or the temperature established in the qualified welding procedure.

(c) The preheat temperature shall be checked by use of temperature-indicating crayons, thermocouples, pyrometers, or other suitable methods to ensure that the required preheat temperature is obtained before, and uniformly maintained during, the welding.

80. In § 56.85-15, revise paragraphs (d), (e), and (i) to read as follows:

§ 56.85-15 Postheating treatment.

(d) The postheating treatment selected for parts of an assembly must not adversely affect other components. Heating a fabricated assembly as a complete unit is usually desirable; however, the size or shape of the unit or the adverse effect of a desired treatment on one or more components where dissimilar materials are involved may dictate alternative procedures, such as heating a section of the assembly before the attachment of others or local circumferential-band heating of welded joints in accordance with § 56.85-15(j)(3) and Note (12) of Table 56.85-10 of this part.

(e) Postheating treatment of welded joints between dissimilar metals having different postheating requirements must be that established in the qualified welding procedure.

(i) For those materials listed under P-1, when the wall thickness of the thicker of the two abutting ends, after their preparation, is less than three-fourths inch, the weld needs no postheating treatment. In all cases,

where the nominal wall thickness is three-fourths inch or less, postheating treatment is not required.

81. In § 56.90-5, revise paragraphs (b) and (d) to read as follows:

§ 56.90-5 Bolting procedure.

(b) When bolting gasketed flanged joints, the gasket must be properly compressed in accordance with the design principles applicable to the type of gasket used.

(d) All bolts must be engaged so that there is visible evidence of complete threading through the nut or threaded attachment.

82. In § 56.90-10, revise the section heading to read as follows:

§ 56.90-10 Threaded piping (modifies 135.5).

§ 56.95-1 [Amended]

83. In § 56.95-1, in paragraphs (a) and (b) remove the term "ANSI-B31.1" wherever it appears and add, in its place, the term "ASME-B31.1".

§ 56.95-10 [Amended]

84. In § 56.95-10(a), remove the term "ANSI-B31.1" and add in its place the term "ASME-B31.1".

§ 56.97-1 [Amended]

85. In § 56.97-1(a), remove the term "ANSI-B31.1" and add in its place the term "ASME-B31.1".

86. In § 56.97-25, revise the section heading to read as follows:

§ 56.97-25 Preparation for Testing (reproduces 137.2).

87. In § 56.97-30, revise the section heading to read as follows:

§ 56.97-30 Hydrostatic tests (modifies 137.4)

PART 58—MAIN AND AUXILIARY MACHINERY AND RELATED SYSTEMS

88. Revise the authority citation for part 58 to read as follows:

Authority: 43 U.S.C. 1333; 46 U.S.C. 3306, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

89. Revise § 58.01-10(a)(3) to read as follows:

§ 58.01-10 Fuel oil.

(a) Subject to such further precautions as the Commanding Officer, Marine Safety Center, considers necessary, and provided that the ambient temperature of the space in which such fuel oil is stored or used does not rise to within 18°F (-7 °C) below the flashpoint of the fuel oil, fuel oil having a flashpoint of less than 140 °F (60 °C) but not less than 110 °F (43 °C) may be used.

90. In § 58.03-1(b), revise the entries for "American Bureau of Shipping (ABS)" and "American Society of Mechanical Engineers (ASME)" to read as follows:

§ 58.03-1 Incorporation by reference.

(b)

American Bureau of Shipping (ABS), ABS Plaza, 16855 Northchase Drive, Houston, TX 77060:

Rules for Building and Classing Steel Vessels, 2003 58.01-5; 58.05-1; 58.10-15; 58.20-5; 58.25-5

American Society of Mechanical Engineers (ASME) International, Three Park Avenue, New York, NY 10016-5990:

Boiler and Pressure Vessel Code, Section I, Power Boilers, 2001 58.30-15
Section VIII, Division 1, Pressure Vessels, 2001 58.30-15

91. In § 58.16-10, revise paragraphs (b)(1) and (c) to read as follows:

§ 58.16-10 Approvals.

(b) (1) Cylinders in which liquefied petroleum gas is stored and handled must be constructed, tested, marked, maintained, and retested in accordance with the regulations of the Department of Transportation. See Title 49, Code of Federal Regulations, Part 178.

(c) Safety-relief devices. All required safety-relief devices must be approved as to type, size, pressure setting, and location by the Commandant (G-MSE) as being in accordance with 49 CFR part 178.

PART 59—REPAIRS TO BOILERS, PRESSURE VESSELS AND APPURTENANCES

92. Revise the authority citation for part 59 to read as follows:

Authority: 46 U.S.C. 3306, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 227; Department of Homeland Security Delegation No. 0170.1.

93. In § 59.01-2(b), revise the entry for "American Society of Mechanical Engineers (ASME) International" to read as follows:

§ 59.01-2 Incorporation by reference.

(b)

American Society of Mechanical Engineers (ASME) International, Three Park Avenue, New York, NY 10016-5900:
Boiler and Pressure Vessel (B&PV), Code Section I, Power Boilers, July 2001
Boiler and Pressure Vessel Code Section VII, Recommended Guidelines for the Care of Power Boilers, July 2001.
Boiler and Pressure Vessel Code Section VIII, Division 1, Pressure Vessels July 2001
Boiler and Pressure Vessel Code Section IX, Welding and Brazing Qualifications, July 1989 with 1989 addenda.

59.10-5
59.01-5
59.10-5; 59.10-10
59.10-5

94. Revise § 59.01-5(e) to read as follows:

§ 59.01-5 Repairs, replacements, or alterations.

* * * * *

(e) Where applicable, manufacturers' instruction books, manuals, and the like, and section VII of the ASME Code must be used for guidance.

PART 61—PERIODIC TESTS AND INSPECTIONS

95. Revise the authority citation for part 61 to read as follows:

Authority: 43 U.S.C. 1333; 46 U.S.C. 2103, 3306, 3307, 3703; Executive Order 12234, 45 FR 58801, 3 CFR 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

96. In § 61.15-10, revise the section heading and paragraph (b) to read as follows:

§ 61.15-10 Liquefied-petroleum-gas piping for heating and cooking.

* * * * *

(b) Test the system for leakage in accordance with the following procedure: With the appliance valve closed, the master shutoff valve on the appliance open, and one cylinder valve open, note pressure in gage.

PART 62—VITAL SYSTEM AUTOMATION

97. Revise the authority citation for part 62 to read as follows:

Authority: 46 U.S.C. 3306, 3703, 8105; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

98. Revise § 62.05-1 to read as follows:

§ 62.05-1 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register. To enforce any edition other than the one listed in paragraph (b) of this section, the Coast Guard must publish notice of the change in the Federal Register and make the material available to the public. All approved material is on file at the Office of the Federal Register, Washington, DC 20408, and at the office of the Commandant (G-MSE), U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593-0001.

(b) The material approved for incorporation by reference in this part is:

American Bureau of Shipping (ABS), ABS Plaza, 16855 Northchase Drive, Houston, TX 77060:
Rules for Building and Classing Steel Vessels, 2003

62.25-30(a)(1), (2), (3), and (5); 62.35-5(d); 62.35-35(a); 62.35-40(c); 62.35-50; 62.50-30(c); and 62.50-30(k)

99. Revise § 62.25-1(c) to read as follows:

§ 62.25-1 General.

* * * * *

(c) Each console for a vital control or alarm system and any similar enclosure that relies upon forced cooling for proper operation of the system must have a backup means of providing cooling. It must also have an alarm activated by the failure of the temperature-control system.

100. Revise § 62.25-5(a) to read as follows:

§ 62.25-5 All control systems.

(a) Local and remote starting for any propulsion engine or turbine equipped with a jacking or turning gear must be prevented while the turning gear is engaged.

* * * * *

101. In § 62.25-30, revise paragraphs (a)(1), (a)(2), (a)(3), and (a)(5) to read as follows:

§ 62.25-30 Environmental design standards.

(a) * * *

(1) Ship motion and vibration described in Table 9 of section 4-9-7 of ABS Rules.

* * * * *

(2) Ambient air temperatures described in Table 9 of part 4-9-7 of ABS Rules.

(3) Electrical voltage and frequency tolerances described in Table 9 of part 4-9-7 of ABS Rules.

* * * * *

(5) Hydraulic and pneumatic pressure variations described in Table 9 of part 4-9-7 of ABS Rules.

* * * * *

102. In § 62.35-5, revise the section heading and paragraph (d) to read as follows:

§ 62.35-5 Remote propulsion-control systems.

* * * * *

(d) Transfer of control location. Transfer of control location must meet

section 4-9-2/5.11 of ABS Rules. Manual alternative-propulsion-control locations must be capable of overriding, and of operating independent of, all remote and automatic propulsion-control locations.

* * * * *

103. Revise § 62.35-35 to read as follows:

§ 62.35-35 Starting systems for internal-combustion engines.

The starting systems for propulsion engines and for prime movers of ships' service generators required to start automatically must meet sections 4-6-5/9.5 and 4-8-2/11.11 of ABS Rules.

104. Revise § 62.35-40(c) to read as follows:

§ 62.35-40 Fuel systems.

* * * * *

(c) Automatic fuel heating. Automatic fuel heating must meet section 4-9-3/15.1 of ABS Rules.

* * * * *

105. In § 62.35–50, Table 62.35–50, revise the footnotes 1, 2, 8, and 9

following the table; and revise Notes 1 and 9 on the table to read as follows:

§ 62.35–50 Tabulated monitoring and safety control requirements for specific systems.

TABLE 62.35.50—MINIMUM SYSTEM MONITORING AND SAFETY CONTROL REQUIREMENTS FOR SPECIFIC SYSTEMS (NOTE 1)

Table with 7 columns marked with asterisks. Includes footnotes 1-9 and a main note about monitoring and controls.

106. In § 62.50–30, revise paragraphs (c) and the introductory text of paragraph (k) to read as follows:

§ 62.50–30 Additional requirements for periodically unattended machinery plants.

(c) Fuel systems. Each system for the service or treatment of fuel must meet section 4–6–4/13.5 of ABS Rules.

(k) Continuity of electrical power. The electrical plant must meet sections 4–8–2/3.11 and 4.8.2/9.9 of ABS Rules, and must—

PART 63—AUTOMATIC AUXILIARY BOILERS

107. Revise the authority citation for part 63 to read as follows:

Authority: 46 U.S.C. 3306, 3703; Executive Order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

§ 63.01–3 [Amended]

108. In § 63.01–3(b) remove the term “(20 gph)”.

109. In § 63.05–1(b), revise the entries for “American Gas Association”, “American Society of Mechanical

Engineers (ASME) International”, “American Society for Testing and Materials (ASTM)”, “International Maritime Organization (IMO)”, “International Organization for Standardization”, and “Underwriters” Laboratories, Inc. (UL)”, and place them in alphabetical order, to read as follows:

§ 63.05–1 Incorporation by reference.

(b) * * *

Table listing references for American Gas Association, ASME, ASTM, IMO, and Underwriters' Laboratories with corresponding section numbers.

110. In § 63.25–1, revise the introductory text to read as follows:

§ 63.25–1 Small automatic auxiliary boilers.

Small automatic auxiliary boilers defined as having heat-input ratings of 400,000 Btu/hr. or less (117 kilowatts or less) must also meet the following requirements:

* * * * *

111. Revise § 63.25–9 to read as follows:

§ 63.25–9 Incinerators.

(a) General. Incinerators installed on or after March 26, 1998, must meet the requirements of IMO resolution MEPC.76(40). Incinerators in compliance with ISO standard 13617, “Ships and marine technology—Shipboard Incinerators—

Requirements”, must meet IMO resolution MEPC.76(40). Incinerators in compliance with both ASTM F 1323, “Standard Specification for Shipboard Incinerators” and Annexes A1–A3 of IMO resolution MEPC.76(40) must meet IMO resolution MEPC.76(40). An application for type approval of shipboard incinerators must be sent to the Commanding Officer, U.S. Coast

Guard Marine Safety Center, Engineering Division, 400 Seventh Street SW, Washington, DC 20590-0001.

(b) *Testing.* Before type approval is granted, the manufacturer must have tests conducted, or submit evidence that such tests have been conducted, by an independent laboratory acceptable to the Commanding Officer, USCG Marine Safety Center. The laboratory must—

- (1) Have the equipment and facilities for conducting the inspections and tests required by this section;
- (2) Have experienced and qualified personnel to conduct the inspections and tests required by this section;
- (3) Have documentary proof of the laboratory's qualifications to perform the inspections and tests required by this section; and
- (4) Not be owned or controlled by a manufacturer, supplier, or vendor of shipboard incinerators.

(c) *Prohibited substances.* Shipboard incineration of the following substances is prohibited:

- (1) Annexes I, II, and III of MARPOL 73/78 on cargo residues and related contaminated packing materials.
- (2) Polychlorinated biphenyls (PCBs).
- (3) Garbage, as defined in Annex V of MARPOL 73/78, containing more than traces of heavy metals.

(4) Refined petroleum products containing halogen compounds.

(d) *Operating manual.* Each ship with an incinerator subject to this rule must possess a manufacturer's operating manual, which must specify how to operate the incinerator within the limits described in Annex A1.5 of Resolution MEPC.76(40).

(e) *Training.* Each person responsible for operating any incinerator must be trained and be capable of implementing the guidance provided in the manufacturer's operating manual.

(f) *Acceptable methods and standards for testing emissions.* The methods and standards for testing emissions that the laboratory may use in determining emissions-related information described in Annex A1.5 of Resolution MEPC.76(40) are—

- (1) 40 CFR part 60 Appendix A, Method 1—Sample and velocity traverses for stationary sources;
- (2) 40 CFR part 60 Appendix A, Method 3A—Determination of oxygen and carbon dioxide concentrations in emissions from stationary sources (instrumental-analyzer procedure);
- (3) 40 CFR part 60 Appendix A, Method 5—Determination of particulate emissions from stationary sources;

(4) 40 CFR part 60 Appendix A, Method 9—Visual determination of the opacity of emissions from stationary sources;

(5) 40 CFR part 60 Appendix A, Method 10—Determination of carbon-monoxide emissions from stationary sources;

(6) ISO standard 9096 (1992) "Stationary source emissions—Determination of concentration and mass flow rate of particulate material in gas-carrying ducts—Manual gravimetric method;" and

(7) ISO standard 10396 (1993) "Stationary source emissions—Sampling for the automated determination of gas concentrations."

PART 76—FIRE PROTECTION EQUIPMENT

112. Revise the authority citation for part 76 to read as follows:

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

113. In § 76.50-5, revise Table 76.50-5(c) to read as follows:

§ 76.50-5 Classification.

* * * * *

TABLE 76.50-5(C)

Classification		Soda acid and water, liters (gallons)	Foam, liters (gallons)	Carbon dioxide, kilograms (pounds)	Dry chemical, kilograms (pounds)
Type	Size				
A	II	9.5 (2.5)	9.5 (2.5)	.....	.....
B	I	.....	4.75 (1.25)	1.8 (4)	.....
B	II	.....	9.5 (2.5)	6.8 (15)	4.5 (10)
B	III	.....	45.5 (12)	15.9 (35)	9.0 (20)
B	IV	.....	76 (20)	22.7 (50)	13.6 (30)
B	V	.....	151 (40)	45.3 (100)	22.7 (50)
C	I	.....	.....	1.8 (4)	1 (2)
C	II	.....	.....	6.8 (15)	4.5 (10)

* * * * *

PART 92—FIRE PROTECTION EQUIPMENT

114. Revise the authority citation for part 92 to read as follows:

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

115. In § 92.15-10, revise paragraph (d) to read as follows:

§ 92.15-10 Ventilation for closed spaces.

* * * * *

(d) The ventilation of spaces that are "specially suitable for vehicles" shall be in accordance with §§ 111.105-39 and

111.105-40 of this chapter, as applicable.

* * * * *

PART 110—GENERAL PROVISIONS

116. Revise the authority citation for part 110 to read as follows:

Authority: 33 U.S.C. 1509; 43 U.S.C. 1333; 46 U.S.C. 3306, 3307, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p.277; Department of Homeland Security Delegation No. 0170.1; § 110.01-2 also issued under 44 U.S.C. 3507.

117. In § 110.10-1(b) revise the entries for "American Bureau of Shipping (ABS)", "American National Standards Institute (ANSI)", "Institute of Electrical

and Electronic Engineers (IEEE)", "International Electrotechnical Commission (IEC)", "International Maritime Organization (IMO)", "National Electrical Manufacturers Association (NEMA)", "National Fire Protection Association (NFPA)", "Naval Publications and Forms Center (NPFC)", "Naval Sea Systems Command (NAVSEA)", and "Underwriters Laboratories Inc. (UL)", and add, in alphabetical order, the entry "American Society of Mechanical Engineers (ASME)" to read as follows:

§ 110.10-1 Incorporation by reference.

* * * * *

(b) * * *

American Bureau of Shipping (ABS), American Bureau of Shipping, ABS Plaza, 16855 Northchase Drive, Houston, TX 77060 USA.
Rules for Building and Classing Steel Vessels, 2003 110.15-1; 111.01-9; 111.12-1(a); 111.12-3; 111.12-5; 111.12-7; 111.33-11; 111.35-1; 111.70-1(a); 111.105-31(n); 111.105-39(a); 111.105-40(a); 113.05-7
Rules for Building and Classing Mobile Offshore Drilling Units, 2001: Including Notice No. 2. 111.12-1(a); 111.12-3; 111.12-5; 111.12-7; 111.33-11; 111.35-1; 111.70-1(a)

American National Standards Institute (ANSI), American National Standards Institute, 25 West 43rd Street, New York, NY 10036.
ANSI/IEEE C37.010, Application Guide for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis, 1999. 111.54-1(c)
ANSI C37.12, For AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis-Specification Guide, 1991. 111.54-1(c)

American Society of Mechanical Engineers (ASME), American Society of Mechanical Engineers, ASME International, 22 Law Drive, Fairfield, NJ 07007-2900.
ASME A17.1, Safety Code for Elevators and Escalators, 2000 111.90-1

Institute of Electrical and Electronic Engineers (IEEE), IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854.
IEEE Std C37.04, IEEE Standard for AV High-Voltage Circuit Breakers, 1999 111.54-1(c)
IEEE Std C37.13, IEEE Standard for Low-Voltage AC Power Circuit Breakers used in Enclosures, 1990. 111.54-1(c)
IEEE Std C37.14, IEEE Standard for Low-Voltage DC Power Circuit Breakers used in Enclosures, 2002. 111.54-1(c)
IEEE Std 45-1998, IEEE Recommended Practice for Electric Installations on Shipboard 111.30-19(a)(1); 111.105-3; 111.105-31(e); 111.105-41.
IEEE Std 45-2002, IEEE Recommended Practice for Electric Installations on Shipboard 111.05-7; 111.15-2(b); 111.30-1; 111.30-5(a); 111.33-3(a); 111.33-5(a); 111.40-1; 111.60-1(d); 111.60-3; 111.60-5(a); 111.60-11(c); 111.60-13(a); 111.60-19(b); 111.60-21; 111.60-23(d); 111.75-5(b); 113.65-5
IEEE Std 100-2000, The New IEEE Standard Dictionary Of Electrical and Electronics Terms. 110.15-1(a)
IEEE Std 331, Application Guide for Low-Voltage AC Nonintegrally Fused Power Circuit Breakers (Using Separately Mounted Current-Limiting Fuses) (IEEE C37.27), 1987. 111.54-1(c)
IEEE Std 1202-1991, IEEE Standard for Flame Testing of Cables for use in Cable Tray in Industrial and Commercial Occupancies, 1991. 111.60-6(a); 111.107-1(c)
IEEE Std 1580-2001, IEEE Recommended Practice for Marine Cable for Use on Shipboard and Fixed or Floating Platforms, 2001. 111.60-1(a); 111.60-1(c); 111.60-2; 111.60-3(a); 111.60-3(b).

* * * * *

International Electrotechnical Commission (IEC) International Electrotechnical Commission, 3 Rue de Varembe, Geneva, Switzerland.
IEC 60068-2-52, Corr.1 (1996-07) Basic Environmental Testing Procedures Part 2: Tests. Test KB: Salt Mist, Cyclic (Sodium Chloride Solution). 110.15-1(b)
IEC 60331-11 (1999-04) Tests on Electric Cables Under Fire Conditions, Part 1: Test on a Single Vertical Insulated Wire or Cable. 113.30-25(i)
IEC 60331-21 (1999-04) Tests for electric Cables Under fire conditions—Circuit Integrity, Part 21: Procedures and requirements—Cables of rated voltage up to and including 0.6/1.0kV. 113.30-25(i)
IEC 60332-1 (1993-04) Tests on electric cables under fire conditions, Part 1: Test on a single vertical insulated wire or cable. 111.30-19(b)
IEC 60332-3-22 (2000-10), Tests on electric cables under fire conditions—Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables—Category A. 111.60-1(b); 111.60-2; 111.60-6(a); 111.107-1(c)
IEC 60079-0 (2000-06), Electrical explosive gas atmospheres—Part 0: General Requirements. (Edition 3.1) For apparatus. 111.105-1; 111.105-3; 111.105-5; 111.105-7; 111.105-15(b); 111.105-17(b)
IEC 60079-1(2001-02), Electrical apparatus for explosive gas atmospheres—Part 1: Flameproof enclosures “d”. (Including Corr.1 (2001-06)). 111.105-3; 111.105-5; 111.105-9; 111.105-15(b); 111.105-17(b)
IEC 60079-2 (2001-02), Electrical apparatus for explosive gas atmospheres—Part 2: Pressurized enclosures “p”. 111.105-3; 111.105-5; 111.105-7(b); 111.105-15(b); 111.105-17(b)
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118. In § 110.15–1, revise paragraph (a) to read as set out below, and in paragraph (b), revise the definition of “Nonsparking fan”, to read as follows:

§ 110.15–1 Definitions.

(a) The electrical and electronic terms are defined in IEEE Std 100 or IEC 60092–101.

(b) * * *

Nonsparking fan means nonsparking fan as defined in ABS Rules for Building and Classing Steel Vessels, section 4–8–3/11.

* * * * *

PART 111—GENERAL PROVISIONS

119. Revise the authority citation for part 111 to read as follows:

Authority: 46 U.S.C. 3306, 3703; Department of Homeland Security Delegation No. 0170.1.

120. In § 111.01–9, remove the Note to § 111.01–9 and revise paragraph (b) to read as follows:

§ 111.01–9 Degrees of protection.

* * * * *

(b) Electrical equipment in locations requiring exceptional degrees of protection as defined in § 110.15–1 of this chapter must be enclosed to meet at

least the minimum degrees of protection in ABS Rules for Building and Classing Steel Vessels, section 4–8–3, Table 2, or appropriate NEMA 250 Type for the service intended. Each enclosure must be designed so that the total rated temperature of the equipment inside the enclosure is not exceeded.

* * * * *

121. Revise § 111.05–7 to read as follows:

§ 111.05–7 Armored and metallic sheathed cable.

When installed, the metallic armor or sheath must meet the installation

requirements of Section 25 of IEEE Std 45.

122. Revise § 111.05–9 to read as follows:

§ 111.05–9 Masts.

Each nonmetallic mast and topmast must have a lightning-ground conductor in accordance with section 10 of IEC 60092–401.

123. Revise § 111.05–33 to read as follows:

§ 111.05–33 Equipment safety grounding (bonding) conductors.

(a) Each equipment-grounding conductor must be sized in accordance with article 250–122 of the National Electrical Code (NEC) (NFPA 70).

(b) Each equipment-grounding conductor (other than a system-grounding conductor) of a cable must be permanently identified as a grounding conductor in accordance with the requirements of article 250–119 of the NEC.

124. Revise § 111.12–1(a) to read as follows:

§ 111.12–1 Prime movers.

(a) Prime movers must meet section 58.01–5 and Subpart 58.10 of this chapter except that those for mobile offshore drilling units must meet Part 4, Chapter 3, sections 4/3.17 and 4/3.19 of the ABS Rules for Building and Classing Mobile Offshore Drilling Units. Further requirements for emergency generator prime movers are in Subpart 112.50 of this chapter.

* * * * *

125. Revise § 111.12–3 to read as follows:

§ 111.12–3 Excitation.

In general, excitation must meet sections 4–8–3/13.2(a), 4–8–5/5.5.1, 4–8–5/5.5.2, and 4–8–5/5.17.6 of the ABS Rules for Building and Classing Steel Vessels, except that those for mobile offshore drilling units must meet Part 4, Chapter 3, sections 4/3.21.1 and 4/3.23.1 of the ABS Rules for Building and Classing Mobile Offshore Drilling Units. In particular, no static exciter may be used for excitation of an emergency generator unless it is provided with a permanent magnet or a residual-magnetism-type exciter that has the capability of voltage build-up after two months of no operation.

126. Revise § 111.12–5 and its heading to read as follows:

§ 111.12–5 Construction and testing of generators.

Each generator must meet the applicable requirements for construction and testing in section 4–8–3 of the ABS Rules for Building and

Classing Steel Vessels except that each one for a mobile offshore drilling unit must meet those in Part 4, Chapter 3, section 4 of the ABS Rules for Building and Classing Mobile Offshore Drilling Units.

127. Revise § 111.12–7 to read as follows:

§ 111.12–7 Voltage regulation and parallel operation.

Voltage regulation and parallel operation must meet:

(a) Sections 4–2–3/7.5.2, 4–2–4/7.5.2, 4–8–3/3.13.2, and 4–8–3/3.13.3 for AC systems;

(c) Section 4–8–3/3.13.3(c) of the ABS Rules for Building and Classing Steel Vessels, and IEC 60092–202 and 301 for DC systems; and

(d) for mobile offshore drilling units, Part 4, Chapter 3, section 4/3.21.2, 4/3.21.3, 4/3.23.2, and 4/3.23.3 of the ABS Rules for Building and Classing Mobile Offshore Drilling Units.

128. Revise § 111.15–2(b) to read as follows:

§ 111.15–2 Battery construction.

* * * * *

(b) Each fully charged lead-acid battery must have a specific gravity that meets section 22 of IEEE Std 45.

* * * * *

129. Revise § 111.20–15 and its heading to read as follows:

§ 111.20–15 Protection of transformers against overcurrent.

Each transformer must have protection against overcurrent that meets article 450 of the NEC or IEC 60092–303.

130. Revise § 111.25–5(a) to read as follows:

§ 111.25–5 Marking.

(a) Each motor must have a marking or nameplate that meets either article 430–7 of the NEC or IEC 60092–301 (clause 16).

* * * * *

131. Revise § 111.30–1 to read as follows:

§ 111.30–1 Location and installation.

Each switchboard must meet the location and installation requirements in section 8.2 of IEEE Std 45 or IEC 60092–302, as applicable.

132. In § 111.30–5, revise paragraphs (a)(1) and (a)(2) to read as follows:

§ 111.30–5 Construction.

(a) * * *

(1) For low voltages, either section 8.3 of IEEE Std 45 or IEC 60092–302, as appropriate.

(2) For medium voltages, either section 8.4 of IEEE Std 45 or IEC 60092–302, as appropriate.

* * * * *

133. In § 111.30–19, revise paragraphs (a)(1), (a)(2), and (b)(4) to read as follows:

§ 111.30–19 Buses and wiring.

(a) * * *

(1) Section 7.10 of IEEE Std 45; or
(2) IEC 60092–302 (clause 6).

* * * * *

(b) * * *

(4) Flame-retardant meeting ANSI/UL 1581 test VW–1 or IEC 600332–1; and

* * * * *

134. In § 111.33–3, revise paragraphs (a)(1) and (2) to read as follows:

§ 111.33–3 Nameplate data.

(a) * * *

(1) Section 10.20.12 of IEEE Std 45; or
(2) IEC 60092–304 (clause 8).

* * * * *

135. In § 111.33–5, revise paragraphs (a) and (b) to read as follows:

§ 111.33–5 Installations.

* * * * *

(a) Sections 10.20.2, 10.20.7, and 10.20.8 of IEEE Std 45; or
(b) IEC 60092–304.

136. Revise § 111.33–11 to read as follows:

§ 111.33–11 Propulsion systems.

Each power semiconductor rectifier system in a propulsion system must meet sections 4–8–5/5.17.9 and 4–8–5/5.17.10 of ABS Rules for Building and Classing Steel Vessels, except that each one for mobile offshore drilling units must meet those in Part 4, Chapter 3, section 4/3.5.3 of ABS Rules for Building and Classing Mobile Offshore Drilling Units.

137. Revise § 111.35–1 to read as follows:

§ 111.35–1 Electrical propulsion installations.

Each electric propulsion installation must meet sections 4–8–5/5.5, 4–8–5/5.11, 4–8–5/5.13, 4–8–5/5.17.8(e), 4–8–5/5.17.9, and 4–8–5/5.17.10 of ABS Rules for Building and Classing Steel Vessels except that each one for mobile offshore drilling units must meet those in Part 4, Chapter 3, section 4/3.5.3 of ABS Rules for Building and Classing Mobile Offshore Drilling Units.

138. Revise § 111.40–1 to read as follows:

§ 111.40–1 Panelboard standard.

Each panelboard must meet section 17.1 of IEEE Std 45.

139. In § 111.50–3, revise paragraphs (c), (e), and (g)(2) to read as follows:

§ 111.50-3 Protection of conductors.

* * * * *

(c) Fuses and circuit breakers. If the allowable current-carrying capacity of the conductor does not correspond to a standard rating for fuses or circuit breakers that meets article 240-6 of the NEC or IEC 60092-202, then the next larger such rating is acceptable, except that:

(1) This rating must not be larger than 150 percent of the current-carrying capacity of the conductor; and

(2) The effect of temperature on the operation of fuses and thermally controlled circuit breakers must be taken into consideration.

* * * * *

(e) Thermal devices. No thermal cutout, thermal relay, or other device not designed to open a short circuit may be used for protection of a conductor against overcurrent due to a short circuit or ground, except in a motor circuit as described in Article 430 of the National Electrical Code or in IEC 60092-202.

* * * * *

(g) * * *

(2) For motor-running protection described in Article 430 of the National Electrical Code or in IEC 60092-202.

140. Revise § 111.50-9 to read as follows:

§ 111.50-9 Disconnecting and guarding.

Disconnecting and guarding of overcurrent protective devices must meet Part IV of Article 240 of the National Electrical Code.

141. Revise § 111.52-5(c) to read as follows:

§ 111.52-5 Systems 1500 kilowatts or above.

* * * * *

(c) Estimated calculations using IEC 61363-1.

* * * * *

142. Revise § 111.53-1(a)(1) to read as follows:

§ 111.53-1 General.

(a) * * *

(1) Meet the general provisions of article 240 of the NEC or IEC 60092-202 as appropriate.

* * * * *

143. In § 111.54-1, revise paragraphs (a)(1), (b), and (c) to read as follows:

§ 111.54-1 Circuit breakers.

(a) * * *

(1) Meet the general provision of article 240 of the NEC or IEC 60092-202 as appropriate;

* * * * *

(b) No molded-case circuit breaker may be used in any circuit having a

nominal voltage of more than 600 volts (1,000 volts for a circuit containing a circuit breaker manufactured to the standards of the IEC). Each molded-case circuit breaker must meet UL 489-9 and its marine supplement 489 SA or IEC 60947-2 Part 2, except as noted in paragraph (e) of this section.

(c) Each circuit breaker, other than a molded-case one, that is for use in any of the following systems must meet the following requirements:

(1) An alternating-current system having a nominal voltage of 600 volts or less (1,000 volts for such a system with circuit breakers manufactured to the standards of the IEC) must meet—

- (i) IEEE Std C37.13;
(ii) IEEE Std 331; or
(iii) IEC 60947-2.

(2) A direct-current system of 3,000 volts or less must meet IEEE Std C37.13 or IEC 60947-2.

(3) An alternating-current system having a nominal voltage greater than 600 volts (or greater than 1,000 volts for IEC standard circuit breakers) must meet—

- (i) IEEE Std C37.04 including all referenced supplements, ANSI/IEEE C37.010-79 including all referenced supplements, and ANSI C37.12; or
(ii) IEC 62271-100.

* * * * *

144. Revise § 111.55-1 (a) to read as follows:

§ 111.55-1 General.

(a) Each switch must meet Article 404 of the NEC.

* * * * *

145. Revise § 111.59-1 to read as follows:

§ 111.59-1 General.

Each busway must meet Article 368 of the NEC.

146. Revise § 111.60-1 and its heading to read as follows:

§ 111.60-1 Construction and testing of cable.

(a) Each marine shipboard cable must meet all the requirements for construction and identification of either IEEE Std 1580, UL 1309, IEC 60092-353, MIL-C-24640A, MIL-C-24643A, or MIL-C-915, including the respective flammability tests contained therein, and must be of a copper-stranded type.

(b) Each cable constructed to IEC 60092-353 must meet the flammability requirements of IEC 60332-3, Category A.

(c) Electrical cable that has a polyvinyl-chloride insulation with a nylon jacket (Type T/N) must meet either UL 1309 or IEEE Std 1580.

(d) Medium-voltage electric cable must meet the requirements of IEEE Std

45 and UL 1072, where applicable, for cables rated above 5,000 volts.

147. In § 111.60-2, revise the introductory text to read as follows:

§ 111.60-2 Specialty cable for communication and RF applications.

Specialty cable such as certain coaxial cable that cannot pass the flammability test contained in IEEE Std 1580, ANSI/UL 1581 test VW-1, or IEC 60332-2, Category A, because of unique properties of construction, must—

* * * * *

148. Revise § 111.60-3 to read as follows:

§ 111.60-3 Cable application.

(a)(1) Cable constructed according to IEEE Std 1580 must meet the provisions for cable application of section 24 of IEEE Std 45.

(2) Cable constructed according to IEC 60092-353 or UL 1309 must meet section 24 of IEEE Std 45, except 24.6.1, 24.6.7, and 24.8.

(3) Cable constructed according to IEC 60092-353 must meet IEC 60092-352, Table 1, for ampacity values.

(b)(1) Cable constructed according to IEEE Std 1580 must be derated according to Table 25, Note 6, of IEEE Std 45.

(2) Cable constructed according to IEC 60092-353 must be derated according to IEC 60092-352, paragraph 8.

(3) Cable constructed according to MIL-C-24640A or MIL-C-24643A must be derated according to MIL-HDBK-299 (SH).

(c) Cable for special applications defined in section 24 of IEEE Std 45 must meet the provisions of that section.

149. In § 111.60-5, revise paragraphs (a)(1), (a)(2), (b), and (c) to read as follows:

§ 111.60-5 Cable Installation.

(a) * * *

(1) Sections 25, except 25.11, of IEEE Std 45; or

(2) IEC 60092-353 and paragraph 8 of IEC 60092-352.

(b) Each cable installation made in accordance with paragraph 8 of IEC 60092-352 must utilize the conductor ampacity values of Table I of IEC 60092-352.

(c) No cable may be located in any tank unless—

(1) The purpose of the cable is to supply equipment or instruments especially designed for and compatible with service in the tank and whose function requires the installation of the cable in the tank; and

(2) The cable is either compatible with the liquid or gas in the tank or protected by an enclosure.

(3) Neither braided cable armor nor cable metallic sheath may be used as the grounding conductor.

* * * * *

150. Revise § 111.60–6(a) to read as follows:

§ 111.60–6 Fiber optic cable.

* * * * *

(a) Be constructed to pass the flammability test contained in IEEE Std 1202, ANSI/UL 1581 test VW–1 or IEC 60332–3 Category A; or

* * * * *

151. Revise § 111.60–11(c) to read as follows:

§ 111.60–11 Wire.

* * * * *

(c) Wire, other than in switchboards, must meet the requirements in sections 24.6.7 and 24.8 of IEEE Std 45; MIL–W–76D; UL 44; UL 83; or equivalent standard.

* * * * *

152. In § 111.60–13, revise paragraphs (a), (b), and (c) to read as follows:

§ 111.60–13 Flexible electric cord and cables.

(a) *Construction and testing.* Each flexible cord and cable must meet the requirements in section 24.6.1 of IEEE Std 45, article 400 of the NEC, NEMA WC3, NEMA WC70 or UL 62.

(b) *Application.* No flexible cord may be used except—

(1) As allowed under Sections 400–7 and 400–8 of the National Electric Code; and

(2) In accordance with Table 400–4 of the National Electric Code.

(c) *Allowable current-carrying capacity.* No flexible cord may carry more current than allowed under Table 400–5 of the National Electric Code, NEMA WC 3, or NEMA WC 70.

* * * * *

153. Revise § 111.60–19(b) to read as follows:

§ 111.60–19 Cable splices.

* * * * *

(b) Each cable splice must be made in accordance with section 25.11 of IEEE Std 45.

154. Revise § 111.60–21 to read as follows:

§ 111.60–21 Cable insulation tests.

All cable for electric power and lighting and associated equipment must be checked for proper insulation resistance to ground and between conductors. The insulation resistance must not be less than that in section 34.2.1 of IEEE Std 45.

155. In § 111.60–23, revise paragraphs (b), (d), and (f) to read as follows:

§ 111.60–23 Metal-clad (Type MC) cable.

* * * * *

(b) The cable must have a corrugated gas-tight, vapor-tight, and watertight sheath of aluminum or other suitable metal that is close-fitting around the conductors and fillers and that has an overall jacket of an impervious PVC or thermoset material.

* * * * *

(d) The cable must be installed in accordance with article 326 of the NEC. The ampacity values found in table 25 of IEEE Std 45 may not be used.

* * * * *

(f) Equipment grounding conductors in the cable must be sized in accordance with article 250–122 of the NEC. System grounding conductors must be of a cross-sectional area not less than that of the normal current carrying conductors of the cable. The metal sheath must be grounded but must not be used as a required grounding conductor.

* * * * *

156. In § 111.70–1(a), revise the introductory text to read as follows:

§ 111.70–1 General.

(a) Each motor circuit, controller, and protection must meet the requirements of ABS Rules for Building and Classing Steel Vessels, sections 4–8–2/9.17, 4–8–3/5.7.3, 4–8–4/9.5, and 4–8–3/5; ABS Rules for Building and Classing Mobile Offshore Drilling Units, Part 4, Chapter 3, sections 4/7.11 and 4/7.17; or IEC 60092–301, as appropriate, except for the following circuits:

* * * * *

157. In § 111.70–3, revise the section heading and paragraph (a) to read as follows:

§ 111.70–3 Motor controllers and motor-control centers.

(a) *General.* The enclosure for each motor controller or motor-control center must meet either NEMA No. ICS 2, 2000, and NEMA No. ICS 2.3 1995, or Table 5 of IEC 60092–201, as appropriate, for the location where it is installed. In addition, each such enclosure in a hazardous location must meet Subpart 111.105 of this part. NEMA No. ICS 2.4 provides guidance on the differences between devices meeting NEMA and those meeting IEC for motor service.

* * * * *

158. Revise § 111.75–5(b) to read as follows:

§ 111.75–5 Lighting branch circuits.

* * * * *

(b) *Connected Load.* The connected loads on a lighting branch circuit must not be more than 80 percent of the

rating of the overcurrent protective device, computed on the basis of the fixture ratings and in accordance with IEEE Std 45, section 5.4.2.

* * * * *

159. In § 111.75–20, revise paragraphs (a) and (e) to read as follows:

§ 111.75–20 Lighting fixtures.

(a) The construction of each lighting fixture for a non-hazardous location must meet UL 1598A or IEC 60092–306.

* * * * *

(e) Non-emergency and decorative interior-lighting fixtures in environmentally protected, non-hazardous locations need meet only the applicable UL type-fixture standards in UL 1598 and UL 1598A marine supplement or the standards in IEC 60092–306. These fixtures must have vibration clamps on fluorescent tubes longer than 102 cm (40 inches), secure mounting of glassware, and rigid mounting.

160. Revise § 111.81–1(d) to read as follows:

§ 111.81–1 Outlet boxes and junction boxes; general.

* * * * *

(d) Each outlet-box or junction-box installation must meet article 314 of the NEC, UL 50, UL 514 series, or IEC Series 60092 Publications (e.g., IEC 60092–306), as appropriate.

* * * * *

161. Revise § 111.91–1 to read as follows:

§ 111.91–1 Power, control, and interlock circuits.

Each electric power, control, and interlock circuit of an elevator or dumbwaiter must meet ASME A17.1.

162. Revise § 111.101–1 to read as follows:

§ 111.101–1 Applicability.

This subpart applies to each submersible motor-driven bilge pump required on certain vessels under § 56.50–55 of this chapter.

163. Revise § 111.105–1, including its Note, to read as follows:

§ 111.105–1 Applicability.

This subpart applies to installations in hazardous locations as defined in the NEC and in IEC 60079–0.

Note to § 111.105–1: Chemicals and materials in addition to those listed in Article 500 Tables 5–1 and 5–2 of the NEC and IEC 60079–12 are listed in subchapter O of this chapter.

164. Revise § 111.105–3 to read as follows:

§ 111.105-3 General requirements.

All electrical installations in hazardous locations must comply with the general requirements of section 33 of IEEE Std 45 and either the NEC articles 500-505 or IEC 60079 publications series. When installations are made in accordance with the NEC articles, and when installed fittings are approved for the specific hazardous location and the cable type, marine shipboard cable that complies with Subpart 111.60 of this chapter may be used instead of rigid metal conduit.

165. Revise § 111.105-5 to read as follows:

§ 111.105-5 System integrity.

In order to maintain system integrity, each individual electrical installation in a hazardous location must comply specifically with NEC articles 500-505, as modified by § 111.105-3, or the IEC 60079 publications series, but not in combination in a manner that would compromise system integrity or safety. Hazardous location equipment must be approved as suitable for use in the specific hazardous atmosphere in which it is installed. The use of non-approved equipment is prohibited.

166. In § 111.105-7, revise the introductory text and paragraph (b) to read as follows:

§ 111.105-7 Approved equipment.

When this subpart or the NEC states that an item of electrical equipment must be approved, or when IEC 60079-0 states that an item of electrical equipment must be tested or approved in order to comply with IEC 60079 publications series that item must be—

(b) Purged and pressurized equipment that meets NFPA No. 496 or IEC 60079-2.

167. Revise § 111.105-9 to read as follows:

§ 111.105-9 Explosion-proof and flameproof equipment.

Each item of electrical equipment required by this subpart to be explosion-proof under the NEC classification system must be approved as meeting UL 1203. Each item of electrical equipment required by this subpart to be flameproof must be approved as meeting IEC 60079-1.

168. Revise § 111.105-11(a) to read as follows:

§ 111.105-11 Intrinsically safe systems.

(a) Each system required by this subpart to be intrinsically safe must use approved components meeting UL 913 or IEC 60079-11.

* * * * *

169. Revise § 111.105-15 to read as follows:

§ 111.105-15 Additional methods of protection.

Each item of electrical equipment that is—

(a) A sand-filled apparatus must meet IEC 60079-5;

(b) An oil-immersed apparatus must meet either IEC 60079-6 or NEC article 502;

(c) Type of protection “e” must meet IEC 60079-7;

(d) Type of protection “n” must meet IEC 60079-15; and

(e) Type of protection “m” must meet IEC 60079-18.

170. Revise § 111.105-17(b) to read as follows:

§ 111.105-17 Wiring methods for hazardous locations.

* * * * *

(b) Where conduit is installed, the applicable requirements of either the NEC or IEC 60079 must be followed.

* * * * *

171. In § 111.105-31, revise the section heading and paragraphs (e) and (n) to read as follows:

§ 111.105-31 Flammable or combustible cargo with a flashpoint below 60 °C (140 °F), carriers of liquid-sulphur or inorganic acid.

* * * * *

(e) Cargo Tanks. A cargo tank is a Class I, Division 1 (IEC Zone 0) location that has additional electrical equipment restrictions outlined in section 33 of IEEE Std 45 and IEC 60092-502. Cargo tanks must not contain any electrical equipment except the following:

- (1) Intrinsically safe equipment; and
(2) Submerged cargo pump motors and their associated cable.

* * * * *

(n) Duct keel ventilation or lighting.

(1) The lighting and ventilation system for each pipe tunnel must meet ABS Rules for Building and Classing Steel Vessels, section 5-1-7/31.17.

(2) If a fixed gas detection system is installed, it must meet the requirements of SOLAS 74 and ABS Rules for Building and Classing Steel Vessels Part 4, Chapter 3.

172. In § 111.105-39, revise the introductory text and paragraph (a) to read as follows:

§ 111.105-39 Additional requirements for vessels carrying vehicles with fuel in their tanks.

Each vessel that carries a vehicle with fuel in its tank must meet the requirements of ABS Rules for Building and Classing Steel Vessels, section 5-10-4/3, except as follows:

(a) If the ventilation requirements of ABS Rules for Building and Classing

Steel Vessels section 5-10-4/3 are not met, all installed electrical equipment must be suitable for a Class I, Division 1; Zone 0; or Zone 1 hazardous location.

* * * * *

173. In § 111.105-40, revise paragraph (a) and the introductory text in paragraph (c) to read as follows:

§ 111.105-40 Additional requirements for RO/RO vessels.

(a) Each RO/RO vessel must meet ABS Rules for Building and Classing Steel Vessels, section 4-8-4/27.3.2.

* * * * *

(c) Where the ventilation requirement of ABS Rules for Building and Classing Steel Vessels section 4-8-4/27.3.2, is not met—

* * * * *

174. Revise § 111.107-1(c)(1) to read as follows:

§ 111.107-1 Industrial systems.

* * * * *

(c) * * *

(1) Be installed in accordance with § 111.60-5 of this part and meet the flammability-test requirements of either IEEE Std 1201 or IEC 60332-3-22, Category A; or

* * * * *

PART 113—COMMUNICATION AND ALARM SYSTEMS AND EQUIPMENT

175. Revise the authority citation for part 113 to read as follows:

Authority: 46 U.S.C. 3306, 3703; Department of Homeland Security Delegation No. 0170.1.

176. In § 113.05-7, revise paragraphs (a) and (b) to read as follows:

§ 113.05-7 Environmental tests.

* * * * *

(a) Section 4-9-7, Table 9, of ABS Rules for Building and Classing Steel Vessels or the applicable ENV category of Lloyd’s Register Type approval System-Test Specification No. 1; and

(b) IEC 60533 as appropriate.

177. Revise § 113.25-6 to read as follows:

§ 113.25-6 Power supply.

The emergency power source for the general emergency alarm system must meet the requirements of SOLAS 74, Regulation II-1/42 or II-1/43, as applicable.

178. In § 113.25-12, revise paragraph (c) and add paragraph (d) to read as follows:

§ 113.25-12 Alarm signals.

* * * * *

(c)(1) The minimum sound-pressure levels for the emergency-alarm tone in

interior and exterior spaces must be a sound level of not less than 80dB(A) measured at 10 feet on the axis; and

(2) At least 10dB(A) measured at 10 feet on the axis, above the background noise level when the vessel is under way in moderate weather unless flashing red lights are used in accordance with § 113.25–10(b) of this subpart.

(d) Alarm signals intended for use in sleeping compartments may have a minimum sound level of 75dB(A) measured 3 feet (1 meter) on axis and at least 10dB(A) measured 3 feet (1 meter) on axis, above ambient noise levels with the ship under way in moderate weather.

179. Revise § 113.30–3(b) to read as follows:

§ 113.30–3 Means of Communications.

* * * * *

(b) The means of communication and calling must be a reliable means of voice communication and must be independent of the vessel’s electrical system.

180. Revise § 113.30–20(c) to read as follows:

§ 113.30–20 General requirements.

* * * * *

(c) No jack-box or headset may be on a communication system that includes any station required by this subpart, except for a station installed to meet paragraphs 113.30–5(h) or 113.30–25(f).

181. Revise § 113.30–25 to read as follows:

§ 113.30–25 Detailed requirements.

(a) Multiple stations must be able to communicate at the same time.

(b) The loss of one component of the system must not disable the rest of the system.

(c) The system must be able to operate under full load for the same period of operation as required for the emergency generator. See Table 112.05–5(a) of this chapter.

(d) Each voice-communication station device in the weather must be in a

proper enclosure as required in § 111.01–9 of this chapter. The audible-signal device must be outside the station enclosure.

(e) Each station in a navigating bridge or a machinery space must be in an enclosure meeting at least NEMA 250 Type 2 or IEC IP 22.

(f) In a noisy location, such as an engine room, there must be a booth or other equipment to permit reliable voice communication while the vessel is operating.

(g) In a space throughout which the voice communication station audible signal device cannot be heard, there must be another audible-signal device or a visual-device, such as a light, either of which is energized from the final emergency bus.

(h) If two or more voice communication stations are near each other, there must be a means that indicates the station called.

(i) Each connection box must meet at least NEMA 250 Type 4, or 4X, or IEC IP 56.

(j) Voice communication cables must run as close to the fore-and-aft centerline of the vessel as practicable.

(1) No cable for voice communication may run through any space at high risk of fire such as machinery rooms and galleys, unless it is technically impracticable to route it otherwise or it must serve circuits within those spaces.

(2) Each cable running through any space at high risk of fire must meet IEC 60331–11 and IEC60331–21.

(k) If the communications system uses a sound-powered telephone, the following requirements also apply:

(1) Each station except one regulated by paragraph (d) of this section must include a permanently wired headset with a push-to-talk button and a hanger for the headset.

(2) The hanger must be constructed so that it holds the headset away from the bulkhead and so that the motion of the vessel will not dislodge the headset.

(3) Each talking circuit must be electrically independent of each calling circuit.

(4) No short circuit, open circuit, or ground on either side of a calling circuit may affect a talking circuit.

(5) Each circuit must be insulated from ground.

182. Revise § 113.65–5 to read as follows:

§ 113.65–5 General Requirements.

Each whistle operator must meet section 21.5 of IEEEE Std 45.

PART 162—ENGINEERING EQUIPMENT

183. Revise the authority citation for part 162 to read as follows:

Authority: 33 U.S.C. 1321(j), 1903; 46 U.S.C. 3306, 3703, 4104, 4302; Executive order 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp., p. 793; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; Department of Homeland Security Delegation No. 0170.1.

184. Revise § 162.017–1 and its heading to read as follows:

§ 162.017–1 Incorporation by reference.

(a) Certain materials are incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a). 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 make the material available to the public. All approved material is on file at the Office of the Federal Register, 800 North Capitol Street NW., Suite 700, Washington, DC, and at the U.S. Coast Guard, Commandant (G–MSE), 2100 Second Street, SW., Washington, DC, 20593–0001, and is available from the sources listed in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this part and the section affected are:

International Organization for Standardization (ISO) ISO copyright office, Case postale 56 CH–1211 Geneva 20, Switzerland ISO 15364, Ships and marine technology-Pressure/vacuum valves for cargo tanks, 2000 162.017–3

185. Add § 162.017–3(r) to read as follows:

§ 162.017–3 Materials, construction, and workmanship.

* * * * *

(r) Pressure-vacuum relief valves constructed in accordance with ISO 15364 meet the requirements of this subpart.

PART 170—STABILITY REQUIREMENTS FOR ALL INSPECTED VESSELS

186. Revise the authority citation for part 170 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; Department of Homeland Security Delegation No. 0170.1.

187. In § 170.015(b), revise the entry “American Society for Testing and Materials (ASTM)” to read as follows:

§ 170.015 Incorporation by reference.

* * * * *

(b) * * *

American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959
 ASTM F 1196-00, Standard Specification for Sliding Watertight Door Assemblies
 ASTM F 1197-00, Standard Specification For Sliding Watertight Door Control Systems

170.270
170.270

* * * * *

PART 175—GENERAL PROVISIONS

188. Revise the authority citation for part 175 to read as follows:

Authority: 46 U.S.C. 2103, 3205, 3306, 3307, 3703; Pub. L 103-206, 107 Stat. 2439;

49 U.S.C. App. 1804; Department of Homeland Security Delegation No. 0170.1; 175.900 also issued under authority of 44 U.S.C. 3507.

189. In § 175.600(b), add, in alphabetical order, an entry for “International Organization for

Standardization (ISO)” to read as follows:

§ 175.600 Incorporation by reference.

* * * * *

(b) * * *

International Organization for Standardization (ISO), Case postale 56 CH-1211 Geneva 20, Switzerland
 ISO 8849:1990 Small craft—Electrically operated bilge pumps, first edition
 ISO 8846:1990 Small craft—Electrical devices—Protection against ignition of surrounding flammable gases, first edition.

182.500(b)
182.500(b)

* * * * *

PART 182—MACHINERY INSTALLATION

190. Revise the authority citation for part 182 to read as follows:

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

191. In § 182.455, in paragraph (a)(1), revise introductory text and paragraph (iii), to read as follows:

§ 182.455 Fuel piping.

(a) * * *

(1) Fuel lines must be annealed tubing of copper, nickel-copper, or copper-nickel having a minimum wall thickness of 0.9 millimeters (0.035 inches) except that—

* * * * *

(iii) When used, flexible hose must meet the requirements of § 182.720(e) of this part.

* * * * *

192. Revise § 182.500(b) to read as follows:

§ 182.500 General.

* * * * *

(b) A vessel of not more than 19.8 meters (65 feet) in length carrying not more than 12 passengers may meet the requirements of ABYC Project H-22, “DC Electric Bilge Pumps Operating Under 50 Volts”, or the requirements in ISO 8846 and 8849, instead of those of this subpart, provided that each watertight compartment forward of the collision bulkhead is provided with a means for dewatering.

* * * * *

193. Revise § 182.520(e)(1) to read as follows:

§ 182.520 Bilge pumps.

* * * * *

(e) * * *

(1) The pump is listed by an independent laboratory as meeting the requirements in UL 1113;

* * * * *

PART 183—ELECTRICAL INSTALLATION

194. Revise the authority citation for part 183 to read as follows:

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

195. Add § 183.230, under Subpart B—General Requirements, to read as follows:

§ 183.230 Temperature ratings.

Temperature ratings of electrical equipment must meet the requirements of section 111.01-15 of this chapter.

Dated: June 16, 2004.

T. H. Gilmour,

Rear Admiral, U.S. Coast Guard, Assistant Commandant for Marine Safety, Security and Environmental Protection.

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