of cabling, must comply with the regulations in this subchapter.

(c) Conversions specified in 46 U.S.C. 2101(14a), such as the addition of a midbody or a change in the service of the vessel, are handled on a case-by-case basis by the Commanding Officer, Marine Safety Center.

[CGD 94–108, 61 FR 28271, June 4, 1996, as amended at 62 FR 23906, May 1, 1997]

§ 110.01–4 Right of appeal.

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

[CGD 88–033, 54 FR 50380, Dec. 6, 1989]

Subpart 110.10—Reference Specifications, Standards, and Codes

§ 110.10–1 Incorporation by reference.

(a) Certain material is incorporated by reference into this subchapter with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER; and the material must be available to the public. All approved material is available for inspection at the Office of the Federal Register, 800 North Capitol Street NW., Suite 700, Washington, DC, and at the U.S. Coast Guard, (G–MSE), 2100 Second Street SW., Washington, DC 20593–0001, and is available from the sources indicated in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this subchapter and the sections affected are as follows:

American Bureau of Shipping (ABS) American Bureau of Shipping, ABS Plaza, 16855 Northchase Drive, Houston, TX 77060:	
Rules for Building and Classing Steel Vessels, 1996	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, 1994.	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, 11 West 42nd Street, New York, NY 10036:	
ANSI/ASME A17.1, Safety Code for Elevators and Escalators, 1993.	111.91–1
ANSI/ASME A17.1A, Addenda to ANSI/ASME A17.1, Safety Code for Elevators and Escalators (including Errata, 1995), 1994.	111.91–1.
ANSI/IEEE C37.04, Rating Structure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis, 1979.	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 for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959:	
ASTM B 117–97, Standard Practice for Operating Salt Spray (Fog) Apparatus.	110.15–1.
ASTM D 4066–96a, Standard Classification System for Nylon Injection and Extrusion Materials (PA).	111.60–1.
Institute of Electrical and Electronic Engineers (IEEE), IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854:	

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, 1992.	111.54–1(c).
IEEE Std 45–1983, IEEE Recommended Practice for Electric Installations on Shipboard, 1983.	111.05–7; 111.15–2(b); 111.30–1; 111.30–5(a); 111.30–19(a); 111.33–3(a); 111.33–5(a); 111.40–1; 111.60–1(a); 111.60–2; 111.60–3; 111.60–5(a); 111.60–6(a); 111.60–11(c); 111.60–13(a); 111.60–19(b); 111.60–21; 111.60–23(d); 111.75–5(b); 111.105–3; 111.105–31(e); 111.105–41; 111.107–1(c); 113–65–5.
IEEE Std 100–1992, The New IEEE Standard Dictionary of Electrical and Electronics Terms, 1992.	110.15–1(a).
IEEE Std 320, Application Guide for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis (ANSI/IEEE C37.010–79), 1979.	111.54–1(c).
IEEE Std 331, Application Guide for Low-Voltage AC Nonintegrally Fused Power Circuit Breakers (Using Separately Mounted Current-Limiting Fuses) (ANSI/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.	111.60–2; 111.60–6(a); 111.107–1(c).
International Association of Drilling Contractors (IADC), International Association of Drilling Contractors, PO Box 4287, Houston, TX 77210–4287:	
IADC–DCCS–1/1991, Guidelines for Industrial System DC Cable for Mobile Offshore Drilling Units, 1991.	111.60–1(f).
International Electrotechnical Commission (IEC) 3, rue de Varembe, Geneva, Switzerland. (Also available from ANSI—address above.)	
IEC 56, High-Voltage Alternating-Current Circuit-Breakers, 1987, (Including Amendment 1, 1992, Amendment 2, 1995, and Amendment 3, 1996).	111.54–1.
IEC 68–2–52, Basic Environmental Testing Procedures, Part 2: Tests. Test KB: Salt Mist, Cyclic (Sodium Chloride Solution), 1984.	110.15–1(b).
IEC 79–0, Electrical Apparatus for Explosive Gas Atmospheres, Part 0: General Requirements, 1983 (Including Amendment 2, 1991).	111.105–1; 111.105–3; 111.105–5; 111.105–7; 111.105–15(b); 111.105–17(b).
IEC 79–1, Electrical Apparatus for Explosive Gas Atmospheres, Part 1: Construction and Test of Flameproof Enclosures of Electrical Apparatus, 1990 [Including the First Supplement to the Second Edition (1971), 1975, and Amendment 1 to the Third Edition (1990), 1993].	111.105–3; 111.105–5; 111.105–9; 111.105–15(b); 111.105–17(b).
IEC 79–2, Electrical Apparatus for Explosive Gas Atmospheres, Part 2: Electrical Apparatus—Type of Protection ''p'', 1983.	111.105–3; 111.105–5; 111.105–7(b); 111.105–15(b); 111.105–17(b).
IEC 79–5, Electrical Apparatus for Explosive Gas Atmospheres, Part 5: Sand-Filled Apparatus. First Edition (1967), Incorporating the First Supplement, (1969).	111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 111.105–17(b).
IEC 79–6, Electrical Apparatus for Explosive Gas Atmospheres, Part 6: Oil-Immersion ''o'', 1995.	111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 111.105–17(b).
IEC 79–7, Electrical Apparatus for Explosive Gas Atmospheres, Part 7: Increased Safety ''e'', 1990 (Including Amendment 1, 1991, and Amendment 2 1993).	111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 111.105–17(b).
IEC 79–11, Electrical Apparatus for Explosive Gas Atmospheres, Part 11: Intrinsic Safety ''i'', 1991.	111.105–3; 111.105–5; 111.105–11(a); 111.105–15(b); 111.105–17(b).
IEC 79–15, Electrical Apparatus for Explosive Gas Atmospheres, Part 15: Electrical Apparatus with Type of Protection ''n'', 1987.	111.105–3; 111.105–5; 111.105–15(a); 111.105–5(b); 111.105–17(b).

IEC 79–18, Electrical Apparatus for Explosive Gas Atmospheres, Part 18: Encapsulation ''m'', 1992.	111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 111.105–17(b).
IEC 92–3, Electrical Installation in Ships, Part 3: Cables (construction, testing and installations) Second Edition, 1965, as amended through August, 1982.	111.05–7; 111.60–1(a); 111.60–3(a); 111.60–3(c); 111.81–1(d).
IEC 92–101, Electrical Installations in Ships, Part 101: Definitions and General Requirements, 1994 (Including Amendment 1, 1995).	110.15–1(a); 111.81–1(d).
IEC 92–201, Electrical Installations in Ships, Part 201: System Design—General 1994.	111.70–3(a); 111.81–1(d).
IEC 92–202, Electrical Installations in Ships, Part 202: System Design—Protection, 1994.	111.50–3(c); 111.50–3(e); 111.50–3(g); 111.53–1(a); 111.54–1(a); 111.81–1(d).
IEC 92–301, Electrical Installations in Ships, Part 301: Equipment—Generators and Motors, 1980 (Including Amendment 1, 1994, and Amendment 2, 1995).	111.25–5(a); 111.70–1(a); 111.81–1(d).
IEC 92–302, Electrical Installations in Ships, Part 302: Equipment—Switchgear and Controlgear Assemblies, 1980 (Including Amendment 1, 1989, and Amendment 2, 1994).	111.30–1; 111.30–5(a); 111.30–19(a); 111.81–1(d).
IEC 92–303, Electrical Installations in Ships, Part 303: Equipment—Transformers for Power and Lighting, 1980.	111.20–15; 111.81–1(d).
IEC 92–304, Electrical Installations in Ships, Part 304: Equipment—Semiconductor Converters, 1980 (Including Amendment 1, 1995).	111.33–3(a); 111.33–5(b); 111.81–1(d).
IEC 92–306, Electrical Installations in Ships, Part 306: Equipment—Luminaires and Accessories, 1980.	111.75–20(a); 111.81–1(d).
IEC 92–350, Electrical Installations in Ships, Part 350: Low-Voltage Shipboard Power Cables—General Construction and Test Requirements, 1988, Amendment 1 (1994).	111.60–1.
IEC 92–352, Electrical Installations in Ships, Part 352: Choice and Installation of Cables for Low-Voltage Power Systems, 1979, (Including Amendment 1, 1987, and Amendment 2, 1994).	111.60–3(a); 111.60–3(c); 111.60–5; 111.81–1(d).
IEC 92–353, Electrical Installations in Ships, Part 353: Single and Multicore Non-radial Field Power Cables with Extruded Solid Insulation for Rated Voltages 1 kV and 3 kV, Second edition, 1995–01.	111.60–1, 111.60–3.
IEC 92–401, Electrical Installations in Ships, Part 401: Installation and Test of Completed Installation, 1987.	111.05–9.
IEC 92–501, Electrical Installations in Ships, Part 501: Special Features—Electric Propulsion Plant, 1984.	111.81–1(d).
IEC 92–502, Electrical Installations in Ships, Part 502: Tankers—Special Features, 1994.	111.81–1(d); 111.105–31(e).
IEC 92–503, Electrical Installations in Ships, Part 503: Special Features—A.C. Supply systems with Voltages in the Range Above 1KV up to and including 11KV, 1975.	111.30–5(a); 111.81–1(d).
IEC 92–504, Electrical Installations in Ships, Part 504: Special Features—Control and Instrumentation, 1994.	111.81–1(d).
IEC 331, Fire resisting characteristics of electric cables, 1970.	113.30–25(i).
IEC 332–1, Tests on Electric Cables Under Fire Conditions, Part 1: Test on a Single Vertical Insulated Wire or Cable, 1993.	111.30–19(b).
IEC 332–3, Tests on Electric Cables Under Fire Conditions, Part 3: Test on bunched wires or cables, 1992.	111.60–1(b); 111.60–2; 111.60–6(a); 111.107–1(c).
IEC 363, Short-Circuit Current Evaluation with Special Regard to Rated Short-Circuit Capacity of Circuit-Breakers in Installations in Ships, 1972.	111.52–5(c).
IEC 529, Degrees of protection provided by enclosures (IP Code) 1989.	111.01–9(a); 111.01–9(b); 111.01–9(c); 111.01–9(d); 111.01–9 (Note); 113.10–7; 113.20–3; 113.25–11; 113.30–25(c); 113.30–25(h); 113.40–10(b).

IEC 533, Electromagnetic Compatibility of Electrical and Electronic Installations in Ships, 1977.	113.05–7.
IEC 947–2, Low-Voltage Switchgear and Controlgear, Part 2: Circuit Breakers, 1989 (Including Amendment 1, 1992 and Amendment 2, 1993).	111.54–1(b).
IEC IP Code, see IEC 529.	
International Maritime Organization (IMO), International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom:	
International Convention for the Safety of Life at Sea, 1974 (SOLAS 74) Consolidated Edition, (Including 1992 Amendments to SOLAS 74, and 1994 Amendments to SOLAS 74), 1992.	111.99–5; 111.105–31(n); 112.15–1(r); 113.25–6.
The International Society for Measurement and Control (ISA), International Society for Measurement and Control, 67 Alexander Drive. P.O. Box 12277 Research Triangle Park, NC 27709:	
RP 12.6, Wiring Practices for Hazardous (Classified) Locations Instrumentation Part I: Intrinsic Safety, 1995.	111.105–11(e).
National Electrical Manufacturers Association (NEMA), National Electrical Manufacturers Association, 2101 L Street, NW, Washington, DC 20036:	
NEMA Standards Publication No. ICS 2, Industrial Control and Systems Controllers, Contractors, and Overload Relays Rated not more than 2000 Volts AC or 750 Volts DC, 1993.	111.70–3(a).
NEMA Standards Publication No. 2.3 1983, Instructions for the Handling, Installation, Operation, and Maintenance of Motor Control Centers, 1983.	111.70–3(a).
NEMA Standards Publication No. 2.4, NEMA and IEC Devices for Motor Service—A Guide for Understanding the Differences, 1989.	111.70–3(a).
NEMA Standards Publication No. 250, Enclosures for Electrical Equipment (1000 Volts Maximum), 1991.	111.01–9(a); 111.01–9(b); 111.01–9(c); 111.01–9(d); 111.01–9 (Note); 111.10–7; 113.20–3; 113.25–11; 113.30–25(c); 113.30–25(h); 113.40–10(b).
NEMA Standards Publication No. WC–3, Rubber Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy, 1980 (with revisions through May 1989).	111.60–13(a); 111.60–13(c).
NEMA Standards Publication No. WC–8, Ethylene-Propylene-Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy, 1988 (with revisions through 1992).	111.60–13(a); 111.60–13(c).
National Fire Protection Association (NFPA), National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269:	
NEC, see NFPA 70.	
NFPA 70, National Electrical Code (NEC), 1996	111.05–33; 111.20–15; 111.25–5(a); 111.50–3(c); 111.50–7; 111.50–9; 111.53–1(a); 111.54–1(a); 111.55–1(a); 111.59–1; Table 111.60–7; 111.60–13(a); 111.60–13(b); 111.60–13(c); 111.60–23; 111.81–1(d); 111.105–1; 111.105–1 (Note); 111.105–3; 111.105–5; 111.105–7; 111.105–9; 111.105–15(a); 111.105–17(b); 111.107–1(b).
NFPA 77, Recommended Practice on Static Electricity, 1993.	111.105–27.
NFPA 99, Standard for Health Care Facilities, 1996	111.105–37.
NFPA 496, Standard for Purged and Pressurized Enclosures for Electrical Equipment, 1993.	111.105–7(b).

Naval Publications and Forms Center (NPFC), Naval Publications and Forms Center, Customer Service—Code 1052, 5801 Tabor Avenue Philadelphia, PA 19120:

MIL–W–76D, Military Specification Wire and Cable, Hook-up, Electrical, Insulated, General Specification For, 1992.	111.60–11(c).
MIL–W–16878F, Military Specification, Wire, Electrical, Insulated, General Specification For, 1992.	111.60–11(c).
MIL–C–24640A, Military Specification Cables, Light Weight, Electric, Low Smoke, For Shipboard Use, General Specification For, 1995.	111.60–1(a); 111.60–3(c).
MIL–C–24643A, Military Specification Cables and Cords, Electric, Low Smoke, For Shipboard Use, General Specification For, 1994 (Including Amendment 1).	111.60–1(a); 111.60–3(c).

Naval Sea Systems Command (NAVSEA), Naval Sea Systems Command, Code 55Z, Department of Navy Washington, DC 20362:

DDS 300–2, A. C. Fault Current Calculations, 1988	111.52–5.
MIL–HDBK–299 (SH), Military Handbook Cable Comparison Handbook Data Pertaining to Electric Shipboard Cable, 1989.	111.60–3(c).

NEC, see NFPA 70.

Underwriters Laboratories, Inc. (UL) 12 Laboratory Drive, Research Triangle Park, NC 27709–3995.

UL 44, Standard for Rubber-Insulated Wire and Cable, 1991 (including revisions through February, 1996).	111.60–11(c).
UL 50, Standard for Enclosures for Electrical Equipment, 1995.	111.81–1(d).
UL 62, Standard for Flexible Cord and Fixture Wire, 1991 (including revisions through February, 1996).	111.60–13(a).
UL 83, Standard for Thermoplastic-Insulated Wires and Cables, 1991 (including revisions through March, 1996).	111.60–1(c); 111.60–11(c).
UL 489, Standard for Molded-Case Circuit Breakers and Circuit-Breaker Enclosures, 1991 (including revisions through June, 1995).	111.01–15(c); 111.54–1(b).
UL 514A, Standard for Metallic Outlet Boxes, 1991 (including revisions through April, 1995).	111.81–1(d).
UL 514B, Standard for Fittings for Conduit and Outlet Boxes, 1989 (including revisions through April, 1995).	111.81–1(d).
UL 514C, Standard for Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers, 1988 (including revisions through April, 1995).	111.81–1(d).
UL 595, Standard for Marine-Type Electric Lighting Fixtures, 1985 (including revisions through September, 1991).	111.75–20(a); 111.75–20(e).
UL 913, Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III Division 1, Hazardous (Classified) Locations, 1988.	111.105–11(a).
UL 1042, Standard for Electric Baseboard Heating Equipment, 1994 (including revisions through November, 1995).	111.87–3(a).
UL 1072, Standard for Medium-Voltage Power Cables, 1995 (including revisions through January, 1996).	111.60–1(e).
UL 1096, Standard for Electric Central Air Heating Equipment, 1986 (including revisions through January, 1988).	111.87–3(a).
UL 1104, Standard for Marine Navigation Lights, 1981 (including revisions through May, 1988).	111.75–17(d).
UL 1203, Standard for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations, 1994 (including revisions through October, 1995).	111.105–9.
UL 1309, Standard for Marine Shipboard Cable, First edition, July 14, 1995.	111.60–1, 111.60–3.
UL 1569, Standard for Metal-Clad Cables, 1995 (including revisions through April, 1996).	111.60–23(a).
UL 1570, Standard for Fluorescent Lighting Fixtures, 1988 (including revisions through April, 1996).	111.75–20.

UL 1571, Standard for Incandescent Lighting Fixtures, 1995 (including revisions through April, 1996).	111.75–20.
UL 1572, Standard for High Intensity Discharge Lighting Fixtures, 1995 (including revisions through May, 1996).	111.75–20.
UL 1573, Standard for Stage and Studio Lighting Units, 1994 (including revisions through February, 1995).	111.75–20.
UL 1574, Standard for Track Lighting Systems, 1995 (including revisions through July, 1995).	111.75–20.
ANSI/UL 1581, Reference Standard for Electrical Wires, Cables, and Flexible Cords, 1991 (including revisions through January, 1996).	111.30–19(b); 111.60–2; 111.60–6(a).

(c) The word ''should,'' when used in material incorporated by reference, is to be construed the same as the words ''must'' or ''shall'' for the purposes of this subchapter.

[CGD 94–108, 61 FR 28271, June 4, 1996; 61 FR 33045, June 26, 1996; 61 FR 36786–36787, July 12, 1996; 61 FR 49691, Sept. 23, 1996, as amended at 62 FR 23906, May 1, 1997; CGD 97–057, 62 FR 51046, Sept. 30, 1997; USCG 1999–5151, 64 FR 67182, Dec. 1, 1999; USCG–2000–7790, 65 FR 58462, Sept. 29, 2000; USCG–1999–6096, 66 FR 29911, June 4, 2001]

Subpart 110.15—Terms Used in This Subchapter

§ 110.15–1 Definitions.

As used in this subchapter—

(a) The electrical and electronic terms are defined in IEEE Std 100 or IEC 92–101.

(b) In addition to the definitions in paragraph (a) of this section—

Coastwise Vessel means a vessel that normally navigates the waters of any ocean or the Gulf of Mexico 20 nautical miles or less offshore and is certificated for coastwise navigation by the Coast Guard.

Commandant means the Commandant of the Coast Guard.

Corrosion resistant material or finish means any material or finish that meets the testing requirements of ASTM B 117 (incorporated by reference, see §110.10–1) or test Kb in IEC 68–2–52 for 200 hours and does not show pitting, cracking, or other deterioration more severe than that resulting from a similar test on passivated AISI Type 304 stainless steel.

Corrosive location means a location exposed to the weather on vessels operating in salt water or a location on board which may be exposed to the corrosive effects of the cargo carried or of the vessel's systems.

Dead ship condition is the condition in which the main propulsion plant, boilers and auxiliaries are not in operation due to the absence of power.

Dripproof means enclosed so that equipment meets at least a NEMA 250 Type 1 with dripshield, NEMA 250 Type 2, NEMA 250 Type 12, or IEC IP 22 rating.

Embarkation station means a location from which persons embark into survival craft or are assembled before embarking into survival craft.

Emergency squad means the crew designated on the station bill as the nucleus of a damage control party.

Flashpoint means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to form an ignitable mixture with air near the surface of the liquid, as specified by the appropriate test procedure and apparatus.

Great Lakes vessel means a vessel that navigates exclusively on the Great Lakes and their connecting and tributary waters.

Independent laboratory means a laboratory that is accepted by the Commandant under part 159 of this chapter for the testing and listing or certification of electrical equipment.

Location not requiring an exceptional degree of protection means a location which is not exposed to the environmental conditions outlined in the definition for locations requiring exceptional degrees of protection. This location requires the degree of protection of §111.01–9 (c) or (d) of this chapter. These locations include—

(1) An accommodation space;

(2) A dry store room;

(3) A passageway adjacent to quarters;