

(f) *Pull at joints and terminals.* Each flexible cord and cable must be connected to a device or fitting by a knot, tape, or special fitting so that tension is not transmitted to joints or terminal screws.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28281, June 4, 1996; USCG-2003-16630, 73 FR 65198, Oct. 31, 2008]

§ 111.60-17 Connections and terminations.

(a) In general, connections and terminations to all conductors must retain the original electrical, mechanical, flame-retarding, and, where necessary, fire-resisting properties of the cable. All connecting devices must be suitable for copper stranded conductors.

(b) If twist-on type of connectors are used, the connections must be made within an enclosure and the insulated cap of the connector must be secured to prevent loosening due to vibration.

(c) Twist-on type of connectors may not be used for making joints in cables, facilitating a conductor splice, or extending the length of a circuit.

[CGD 94-108, 61 FR 28281, June 4, 1996]

§ 111.60-19 Cable splices.

(a) A cable must not be spliced in a hazardous location, except in intrinsically safe systems.

(b) Each cable splice must be made in accordance with section 25.11 of IEEE 45-2002 (incorporated by reference; see 46 CFR 110.10-1).

[CGD 94-108, 61 FR 28281, June 4, 1996, as amended by USCG-2003-16630, 73 FR 65198, Oct. 31, 2008]

§ 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 45-2002 (incorporated by reference; see 46 CFR 110.10-1).

[USCG-2003-16630, 73 FR 65199, Oct. 31, 2008]

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

(a) Metal-clad (Type MC) cable permitted on board a vessel must be continuous corrugated metal-clad 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.

(c) The cable is not allowed in areas or applications exposed to high vibration, festooning, repeated flexing, excessive movement, or twisting, such as in engine rooms, on elevators, or in the area of drill floors, draw works, shakers, and mud pits.

(d) The cable must be installed in accordance with Article 326 of NFPA NEC 2002 (incorporated by reference; see 46 CFR 110.10-1). The ampacity values found in table 25 of IEEE 45-2002 (incorporated by reference; see 46 CFR 110.10-1) may not be used.

(e) The side wall pressure on the cable must not exceed 1,000 pounds per foot of radius.

(f) Equipment grounding conductors in the cable must be sized in accordance with Section 250.122 of NFPA NEC 2002. 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.

(g) On an offshore floating drilling and production facility, the cable may be used as interconnect cable between production modules and between fixed distribution panels within the production modules, except that interconnection between production and temporary drilling packages is prohibited. Also, the cable may be used within columns, provided that the columns are not subject to the conditions described in paragraph (c) of this section.

(h) When the cable is used within a hazardous (classified) location, terminations or fittings must be listed, and must be appropriate, for the particular