

§ 161.002-2

(e) National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169, 617-770-3000, <http://www.nfpa.org>.

(1) NFPA 72, National Fire Alarm and Signaling Code, 2010 Edition, effective August 26, 2009 (“NFPA 72”), IBR approved for § 161.002-10(b).

(2) [Reserved]

(f) UL (formerly Underwriters Laboratories), 12 Laboratory Drive, P.O. Box 13995, Research Triangle Park, NC 27709, 919-549-1400, <http://www.ul.com>.

(1) UL 38, Standard for Safety for Manual Signaling Boxes for Fire Alarm Systems, Eighth Edition, dated July 3, 2008, as amended through December 11, 2008, IBR approved for § 161.002-6(b).

(2) UL 268, Standard for Safety for Smoke Detectors for Fire Alarm Systems, Sixth Edition, dated August 14, 2009, IBR approved for § 161.002-6(b).

(3) UL 464, Standard for Safety for Audible Signal Appliances, Ninth Edition, dated April 14, 2009, as amended through April 16, 2012, IBR approved for § 161.002-6(b).

(4) UL 521, Standard for Safety for Heat Detectors for Fire Protective Signaling Systems, Seventh Edition, dated February 19, 1999, as amended through October 3, 2002, IBR approved for § 161.002-6(b).

(5) UL 864, Standard for Safety for Control Units and Accessories for Fire Alarm Systems, Ninth Edition, dated September 30, 2003, as amended through January 12, 2011, IBR approved for §§ 161.002-6(b) and 161.002-15(d).

(6) UL 1480, Standard for Safety for Speakers for Fire Alarm, Emergency, and Commercial and Professional Use, Fifth Edition, dated January 31, 2003, as amended through June 23, 2010, IBR approved for § 161.002-6(b).

(7) UL 1971, Standard for Safety for Signaling Devices for the Hearing Impaired, Third Edition, approved November 29, 2002, as amended through October 15, 2008, IBR approved for § 161.002-6(b).

[USCG-2012-0196, 81 FR 48274, July 22, 2016]

§ 161.002-2 Definitions.

In this subpart, the term—

Device means individual components (*e.g.* detectors, control panels, alarms, etc.) that are used to comprise a fire detection system. Devices may receive

46 CFR Ch. I (10-1-19 Edition)

Coast Guard approval in accordance with § 161.002-19.

Fire detection or fire detection and alarm systems system means a complete detection system that is designed to give warning of the presence of fire or smoke in the protected spaces. A complete system includes normal and emergency power supplies, control units, remote annunciator panels, fire detectors and/or smoke detectors, manual pull stations, and audible and visual alarms, which are distinct from the alarms of any other system not indicating fire.

Listed means equipment or materials included in a list published by an organization that is an accepted independent laboratory, as defined in 46 CFR 159.010, or a nationally recognized testing laboratory, as set forth in 29 CFR 1910.7, whose listing states that either the equipment or material meets appropriate designated standards.

Nationally recognized testing laboratory (NRTL) means an organization that the Occupational Safety and Health Administration (OSHA) has recognized as meeting the requirements in 29 CFR 1910.7. These requirements are for the capability, control programs, complete independence, and reporting and complaint-handling procedures to test and certify specific types of products for workplace safety. This means, in part, that an organization must have the necessary capability both as a product safety testing laboratory and as a product certification body to receive OSHA recognition as an NRTL.

Sample extraction smoke detection systems means systems that collect and analyze air samples from protected spaces in order to detect products of combustion. A complete system includes a control unit, a blower box, accumulators, and a piping system with associated fittings.

[USCG-2012-0196, 81 FR 48274, July 22, 2016]

§ 161.002-3 [Reserved]

§ 161.002-4 General requirements.

(a) The purpose of fire detection systems is to give warning of the presence of fire in the protected spaces. To meet this end, the basic requirements of

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these systems are reliability, sturdiness, simplicity of design, ease of servicing, and the ability to withstand shipboard shock and vibration and the adverse effects of sea humidity. All fire detection systems must be designed, constructed, tested, marked, and installed according to the applicable standards as incorporated by reference in § 161.002-1 and 46 CFR chapter I, subchapter J (Electrical Engineering) of this chapter.

(b) Approvals for detection systems issued before July 22, 2017 will remain valid until July 22, 2021.

(c) Detection systems installed, with a valid approval, before July 22, 2021 may be maintained onboard vessels and repaired as indicated in 46 CFR 76.27-80(d).

[USCG-2012-0196, 81 FR 48275, July 22, 2016]

§ 161.002-6 Testing requirements.

(a) Devices must be tested and listed for fire service by an accepted inde-

pendent laboratory, as accepted in accordance with § 159.010 of this subchapter, or by a NR/TL as set forth in 29 CFR 1910.7.

(b) Each fire detection device must comply with the following standards (incorporated by reference, see § 161.002-1) as appropriate:

- (1) Control units—UL 864;
- (2) Heat detectors—UL 521;
- (3) Smoke detectors—UL 268;
- (4) Flame detectors—ANSI/FM 3260;
- (5) Audible alarms—UL 464 or UL 1480;
- (6) Visual alarms—UL 1971; and
- (7) Manual Signaling Boxes—UL 38.

(c) All devices must be tested by an accepted independent laboratory, as defined in § 159.010 of this subchapter, to meet the marine environment testing requirements in Table 161.002-6(c) of this section. The test parameters are found in IEC 60092-504 (incorporated by reference, see § 161.002-1).

TABLE 161.002-6(c)—MARINE ENVIRONMENTAL TESTING REQUIREMENTS

IEC 60092-504 Environmental type test	Category 1	Category 2	Category 3
	All spaces not Category 2 or 3	Open deck or open to weather	Spaces containing navigation or communication equipment
1—Visual inspection	X	X	X
2—Functional test	X	X	X
3—High voltage test	X	X	X
4a—Power supply variations	X	X	X
4b—Power supply failure	X	X	X
5—Insulation resistance	X	X	X
6—Cold with gradual temp. change	X (5 °C)	X (–25 °C)	X (5 °C)
7—Dry heat with gradual temp. change	X (55 °C)	X (55 °C)	X (55 °C)
8—Damp heat, cyclic	X	X	X
9—Salt mist .....	.....	X	.....
10—Vibration (sinusoidal)	X	X	X
11b—Inclination, dynamic	¹ X	¹ X	¹ X
13—Electrostatic discharge	X	X	X
14—Electromagnetic field	X	X	X
15—Conducted low frequency	X	X	X
16(a)—Conducted radio frequency (3 V rms)	X	.....	.....
16(b)—Conducted radio frequency (10 V rms) .....	.....	X	X
17—Burst/fast transients	X	X	X
18—Surge/slow transients	X	X	X
19(a)—Radiated emission (general power)	X	.....	.....
19(b)—Radiated emission (bridge and deck zone) .....	.....	X	X
20(a)—Conducted emission (general power)	X	.....	.....
20(b)—Conducted emission (bridge and deck zone) .....	.....	X	X

¹ This test only needs to be completed if the device is in a location with moving mechanical parts.

(d) All fire detection system control units and remote annunciators must have enclosure protection as outlined in part 5 of IEC 60092-504 (incorporated by reference, see § 161.002-1) if the re-

quirements exceed those of 46 CFR 111.01-9. Otherwise, 46 CFR 111.01-9 must be complied with.

[USCG-2012-0196, 81 FR 48275, July 22, 2016]