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- (3) Have a minimum Equivalent Fixed Intensity within a vertical divergence of ±3 degrees of at least 15 cd.
- (b) If an electric light emits a directional beam of light, the light must:
- (1) Have an Equivalent Fixed Intensity of no less than 25 cd within ±4 degrees vertical and ±4 degrees horizontal divergence centered about the peak intensity; and,
- (2) Have a minimum peak Equivalent Fixed Intensity of 2,500 cd.
- (c) The Equivalent Fixed Intensity (EFI) is the intensity of the light corrected for the length of the flash and is determined by the formula:

$$EFI = I \times (t_c - t_i) / 0.2 + (t_c - t_i)$$

Where:

- I is the measured intensity of the fixed beam,
- t_c is the contact closure time in seconds, (0.33 for this S-O-S signal), and
- t_i is the incandescence time of the lamp in seconds.
- (d) An electric light which meets the requirements of either paragraph (a) or (b) of this section need not, if capable of operating in both manners, meet the requirements of the other paragraph.

§161.013-7 Signal requirements.

- (a) An electric light must have a flash characteristic of the International Morse Code for S-O-S and, under design conditions,
- (1) Each short flash must have a duration of ½ second;
- (2) Each long flash must have a duration of 1 second;
- (3) The dark period between each short flash must have a duration of \(\frac{1}{3} \) second;
- (4) The dark period between each long flash must have a duration of $\frac{1}{3}$ second:
- (5) The dark period between each letter must have a duration of 2 seconds;
- (6) The dark period between each S-O-S signal must have a duration of 3
- seconds.
 (b) The flash characteristics described in paragraph (a) must be produced automatically when the signal is activated.

§ 161.013-9 Independent power source.

(a) Each independent power source must be capable of powering the light

so that it meets the requirements of §161.013-3(a)(1) and emits a recognizable flash characteristic of the International Morse Code for S-O-S at a rate of between 3 and 5 times per minute after six hours of continuous display of the signal.

- (b) If the independent power source is rechargeable, it must have a water-proof recharger designed for marine
- (c) If the independent power source requires external water to form an electrolyte, it must operate in sea water and fresh water.

§161.013-11 Prototype test.

- (a) Each manufacturer must test a prototype light identical to the lights to be certified prior to the labeling required by \$161.013–13.
- (b) If the prototype light fails to meet any of the general performance requirements of §161.013-3 the lights must not be certified under this subpart.
 - (c) Each manufacturer must:
- (1) Forward the test results within 30 days to the Commandant (CG-521), U. S. Coast Guard, 2100 2nd St., SW., Stop 7126, Washington, DC 20593-7126; and
- (2) Retain records of the test results for at least 5 years, or as long as the light is manufactured and certified, whichever is longer.

[CGD 76–183a, 44 FR 73054, Dec. 17, 1979, as amended by CGD 88–070, 53 FR 34536, Sept. 7, 1988; CGD 95–072, 60 FR 50467, Sept. 29, 1995; CGD 96–041, 61 FR 50734, Sept. 27, 1996]

§ 161.013–13 Manufacturer certification and labeling.

- (a) Each electric light intended as a Night Visual Distress Signal required by 33 CFR part 175 must be certified by the manufacturer as complying with the requirements of this subpart.
- (b) Each electric light must be legibly and indelibly marked with:
 - (1) Manufacturer's name;
 - (2) Replacement battery type;
 - (3) Lamp size; and
 - (4) The following words—
- "Night Visual Distress Signal for Boats Complies with U. S. Coast Guard Requirements in 46 CFR 161.013. For Emergency Use Only."
- (c) If an electric light is designed for use with dry cell batteries the label

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must advise the consumer on the battery replacement schedule which under normal conditions would maintain performance requirements of §161.013-3.

§ 161.013-17 Manufacturer notification.

Each manufacturer certifying lights in accordance with the specifications of this subpart must send written notice to the Commandant (CG-521), U. S. Coast Guard, 2100 2nd St., SW., Stop 7126, Washington, DC 20593-7126 within 30 days after first certifying them, and send a new notice every five years thereafter as long as it certifies lights.

[CGD 76-183a, 44 FR 73054, Dec. 17, 1979, as amended by CGD 88-070, 53 FR 34536, Sept. 7, 1988; CGD 95-072, 60 FR 50467, Sept. 29, 1995; CGD 96-041, 61 FR 50733, Sept. 27, 1996]

PART 162—ENGINEERING **EQUIPMENT**

Subpart 162.017—Valves, Pressure-Vacuum Relief, for Tank Vessels

Sec.

162.017 - 1Incorporation by reference.

162.017 - 2Type.

162.017-3 Materials, construction, and workmanship.

162.017–4 Inspections and testing. 162.017–5 Marking.

162.017-6 Procedure for approval.

Subpart 162.018—Safety Relief Valves, **Liquefied Compressed Gas**

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Subpart 162.027—Combination Solid Stream and Water Spray Firehose Nozzles

162.027-1 Incorporation by reference.

162.027-2 Design, construction, testing and marking requirements.

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Subpart 162.028—Extinguishers, Fire, Portable, Marine Type

162 028-1 Applicable specifications.

162.028 - 2Classification.

162.028-3 Requirements.

162.028-4 Marine type label.

162 028-5 Independent laboratories: Listing

162.028-6 Examinations, tests, and inspections.

162.028-7 Procedure for listing and labeling. 162.028-8 Termination of listing or labeling.

Subpart 162.039—Extinguishers, Fire, Semiportable, Marine Type

162.039-1 Applicable specifications.

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162.039-3 Requirements 162.039-4

Marine type label. 162.039 - 5Recognized laboratory.

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tions.

162.039-7Procedure for listing and labeling. 162.039-8 Termination of listing or labeling.

Subpart 162.050—Pollution Prevention Equipment

162.050-1 Scope.

162.050-3 Definitions.

162.050-4 Incorporation by reference: Where can I get a copy of the publications mentioned in this part?

162.050-5 Contents of application.

162.050-7Approval procedures.

162.050-9 Test report.

162.050-11 Marking.

162.050-13 Factory production and inspection.

162.050-15 Designation of facilities.

162.050-17 Separator test rig.

162.050-19 Oil content meter and bilge alarm test rig.

162.050-20 Separator and bilge alarm test fluids.

162.050-21 Separator: Design specification.

162.050-23 Separator: Approval tests.

162.050-25 Cargo monitor: Design specification.

162.050-27 Oil content meter: approval tests. 162.050-33 Bilge alarm: Design specification.

162.050-35 Bilge alarm: Approval tests.

162.050-37 Vibration test.

162.050-39 Measurement of oil content.

AUTHORITY: 33 U.S.C. 1321(j), 1903; 46 U.S.C. 3306, 3703, 4104, 4302; E.O. 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 162.017—Valves. sure-Vacuum Relief, for Tank Vessels

SOURCE: CGFR 50-9, 15 FR 1680, Mar. 25, 1950, unless otherwise noted.

§ 162.017–1 Incorporation by reference.

(a) Certain material is incorporated by reference into this subchapter with