

pump or if the alarm is not equipped with a mixture pump, the influent flow rate is increased to twice the alarm's maximum design flow rate. After increasing the pressure or flow rate, the oil content in the mixture is increased until the alarm actuates. The ppm display is recorded and a sample of the mixture causing actuation is taken.

(e) *Test No. 4A Shutoff Test.* (1) The steps described in paragraph (d)(1) of this section are repeated.

(2) The metering and water pumps of the test rig are stopped for 8 hours with the bilge alarm left turned on with no other changes made.

(3) The metering and water pumps are started and the Test Fluid B content of the mixture is increased until the bilge alarm actuates. A sample of the mixture causing actuation is taken. The bilge alarm ppm display readings before and after the 8-hour period will be recorded.

(f) *Test No. 5A Supply Voltage Variation Test.* (1) The supply voltage to the bilge alarm is raised to 110 percent of its design supply voltage. The bilge alarm is fed with a mixture of Test Fluid B and water and the test fluid content of the mixture is increased until the bilge alarm actuates. The ppm display is recorded and a sample of the mixture causing actuation is taken.

(2) The supply voltage to the alarm is lowered to 90 percent of its design supply voltage. The bilge alarm is fed with a mixture of Test Fluid B and water and the test fluid content of the mixture is increased until the bilge alarm actuates. The ppm display is recorded and a sample of the mixture causing actuation is taken.

(3) Upon completion of the steps described in paragraph (f)(2) of this section, the supply voltage to the alarm is returned to its design value.

(4) The steps described in paragraphs (f)(1) through (f)(3) of this section are repeated varying each other power supply to the alarm in the manner prescribed in those steps for supply voltage.

(g) *Test No. 6A Calibration and Zero Drift Test.* (1) The steps described in paragraph (b)(1) of this section are repeated and then the steps in paragraph (d)(1) of this section are repeated.

(2) The bilge alarm is fed with a 15 ppm mixture of Test Fluid B and water for eight hours and any calibration drift is recorded. Samples of the mixture must be taken at the beginning of the test and at 2-hour intervals until the completion of the 8-hour period.

(3) Following the steps in paragraph (g)(2) of this section, the bilge alarm must be run on clean, oil-free water only and any zero drift must be recorded.

(h) *Test No. 7A Response Time Test.* (1) The bilge alarm is fed with a 40 ppm mixture of Test Fluid B and water until the bilge alarm actuates. The time of turning on the metering pump of the test rig and the time of alarm actuation are recorded. The flow rate on the flow meter of the test rig is also recorded.

(i) *Test No. 8A Shutdown and Restart Test.* (1) All power to the bilge alarm is shutoff for 1 week. After 1 week the alarm is then restarted, zeroed, and calibrated.

(2) The steps described in paragraph (d)(1) of this section are repeated. Water is then fed to the bilge alarm for 1 hour.

(3) The steps described in paragraph (i)(2) of this section are repeated seven additional times. During the last hour, the alarm must be inclined at an angle of 22.5° with the plane of its normal operating position.

[USCG-2004-18939, 74 FR 3391, Jan. 16, 2009]

#### § 162.050-37 Vibration test.

(a) Equipment submitted for Coast Guard approval must first be tested under the conditions prescribed in paragraph (b) of this section. The test must be performed at an independent laboratory that has the equipment to subject the item under test to the vibrating frequencies and amplitudes prescribed in paragraph (b) of this section. The test report submitted with the application for Coast Guard approval must be prepared by the laboratory and must contain the test results.

(b)(1) Each oil content meter and bilge alarm and each control of a separator must be subjected to continuous sinusoidal vibration in each of the following directions for a 2 hour period in each direction:

(i) Vertically up and down;

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(ii) Horizontally from side to side; and

(iii) Horizontally from end to end.

(2) The vibrating frequency must be 80 Hz, except that the vibrating frequency of equipment that has a resonant frequency between 2 Hz and 80 Hz must be the resonant frequency. If the vibrating frequency is between 2 Hz and 13.2 Hz, the displacement amplitude must be  $\pm 1$  mm. If the vibrating frequency is between 13.2 Hz and 80 Hz, the acceleration amplitude must be  $\pm [(.7)(\text{gravity})]$ .

(c) After completion of the tests specified in paragraph (b) of this section, a search must again be made for resonance and any significant change in the vibration pattern must be noted in the test report.

[CGD 76-088a, 44 FR 53359, Sept. 13, 1979, as amended by USCG-2004-18939, 74 FR 3392, Jan. 16, 2009]

## § 162.050-39 Measurement of oil content.

The collection and testing of all samples of oil in water from the required test will be accomplished in accordance with ISO 9377-2 (2000), Water Quality—Determination of hydrocarbon oil index-Part 2: Method Using solvent extraction and Gas Chromatography (incorporated by reference, see § 162.050-4).

[USCG-2004-18939, 74 FR 3393, Jan. 16, 2009]

## PART 163—CONSTRUCTION

### Subpart 163.001 [Reserved]

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163.003-27 Production tests and examination.

AUTHORITY: 46 U.S.C. 3306, 3703, 5115; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

SOURCE: CGFR 50-30, 16 FR 1086, Feb. 6, 1951, unless otherwise noted.

### Subpart 163.001 [Reserved]

### Subpart 163.002—Pilot Hoist

SOURCE: CGD 74-140, 46 FR 63287, Dec. 31, 1981, unless otherwise noted.

#### § 163.002-1 Scope.

(a) This subpart contains standards and approval and production tests for pilot hoists used on merchant vessels.

(b) The requirements in this subpart apply to a pilot hoist designed for use along a vertical portion of a vessel's hull.

#### § 163.002-3 Applicable technical regulations.

(a) This subpart makes reference to the following Coast Guard regulations in this chapter:

(1) Subpart 58.30 (Fluid Power and Control Systems).

(2) Section 94.33-10 (Description of Fleet Angle).

(3) Part 111 (Electrical System, General Requirements).

(4) Subpart 163.003 (Pilot Ladder).

(b) [Reserved]

#### § 163.002-5 Definitions.

(a) *Maximum persons capacity* means—

(1) If the hoist has a rigid ladder, one person; or

(2) If the hoist has a platform, one person per square meter (10.75 sq. ft.) or fraction thereof of platform area (including hatch area);

(b) *Working load* means the sum of the weights of—

(1) The rigid ladder or lift platform, the suspension cables (if any) and the pilot ladder on a pilot hoist; and