

(o) Welding, when employed, shall be performed by welders certified by the U. S. Coast Guard, American Bureau of Shipping, or U.S. Navy Department, and the electrodes used shall be of an approved type.

(p) Inspection openings shall be provided in the winch housing or the housing itself shall be so arranged as to permit examination of the internal working parts.

(q) Motor clutches, when used, shall be of either frictional or positive engaging type. When one motor is used for two winches, the clutch shall be so arranged that only one winch shall be engaged at any one time. The clutch operating lever shall be capable of remaining in any position when subject to vibration and shall be so arranged that when in neutral position, both lifeboats may be lowered simultaneously.

[CGFR 49-18, 14 FR 5111, Aug. 17, 1949, as amended by CGFR 51-20, 16 FR 5443, June 8, 1951; CGFR 58-31, 23 FR 6883, Sept. 6, 1958; CGFR 65-9, 30 FR 11465, Sept. 8, 1965; CGD 72-133R, 37 FR 17039, Aug. 24, 1972; CGD 73-103R, 39 FR 11273, Mar. 27, 1974]

#### § 160.015-4 Capacity of lifeboat winches.

(a) A lifeboat winch shall be approved for a working load after it has been demonstrated by detailed calculations that this working load can be carried with a minimum factor of safety of six based on the ultimate strengths of the materials. It will also be necessary to conduct the tests specified in §160.015-5.

(b) [Reserved]

[CGFR 49-18, 14 FR 5111, Aug. 17, 1949]

#### § 160.015-5 Inspection and testing of lifeboat winches.

(a) *Material testing.* (1) The manufacturer shall furnish affidavits relative to the physical and chemical properties of the materials. Such affidavits shall be furnished by the foundry or mill supplying the material.

(b) *Factory test for initial approval.* (1) Lifeboat winches shall be tested for strength and operation at a place chosen by the manufacturer of the winch in the presence of an inspector. The lifeboat winch under test shall be set up similar to the intended shipboard

installation. In the case of a lifeboat winch with nongrooved drums, the drums shall be built up or sufficiently filled with wire to simulate the maximum number of wraps for which the winch is to be approved. The tests to be conducted are as noted in paragraphs (b)(2) to (8) of this section. The limiting values of velocities and the 2 foot braking distance set forth in the following paragraphs of this section are the values to be actually achieved with the specific arrangement of falls contemplated for the shipboard installation. If a different arrangement of falls is used to facilitate testing, due consideration shall be given to the use of limiting velocities, braking distances, and test weights which will be equivalent to the test performed with an arrangement of falls identical to that used for the shipboard installation.

(2) A pull of 2.2 times the working load, equally divided between drums, shall be applied in a direction similar to a shipboard installation. The test weight producing this load shall be dropped through a distance of not less than 15 feet, at which time this weight shall be stopped within a distance of 2 feet by action of the counterweight alone on the hand brake.

(3) A test identical to that noted in paragraph (b)(2) of this section shall be conducted after the braking surfaces have been thoroughly wetted. The test weight shall be stopped by the action of the counterweight alone within a distance of 6 feet. The test need only be applied to lifeboat winches having external brakes.

(4) With a pull equal to the working load, it shall be determined that the governor brake will limit the speed of lowering of the test weight to a maximum of 120 feet per minute, except that, in the case of winches designed for use with emergency lifeboats aboard passenger vessels, the speed of lowering shall not exceed 160 feet per minute.

(5) With a pull equal to 0.3 times the working load, it shall be determined that the winch will lower the test weight at not less than 40 feet per minute, except that, in the case of