

**§ 161.006-1**

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

**Subpart 161.006—Searchlights,  
Motor Lifeboat, for Merchant  
Vessels**

SOURCE: CGFR 49-43, 15 FR 127, Jan. 11, 1950, unless otherwise noted.

**§ 161.006-1 Applicable specifications.**

(a) The following specifications, of the issue in effect on the date motor lifeboat searchlights are manufactured, form a part of this subpart:

(1) Navy Department specifications:

42S5—Screws, machine, cap and set, and nuts.

43B11—Bolts, nuts, studs, and tap-rivets (and materials for same).

(2) Federal specification:

QQ-B-611—Brass, Commercial; bars, plates, rods, shapes, sheets, and strip.

(3) Standards of ASTM:

ASTM B 117-97, Standard Practice for Operating Salt Spray (Fog) Apparatus—161.006-5

ASTM B 456-95, Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium—161.006-4

You may obtain these standards from The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(4) Underwriters' Laboratories, Inc.:

Standard for flexible cord and fixture wire, third edition, October, 1935.

(b) Copies of the above specifications shall be kept on file by the manufacturer, together with the approved plans and certificate of approval.

[CGFR 49-43, 15 FR 127, Jan. 11, 1950, as amended by USCG-1999-5151, 64 FR 67185, Dec. 1, 1999]

**§ 161.006-2 Type.**

(a) The motor lifeboat searchlight shall be of the incandescent type equipped with a lamp of approximately 90 watts of proper voltage for use with the electric power installation of the lifeboat, usually a 12-volt radio storage battery.

(b) [Reserved]

**§ 161.006-3 Materials and workmanship.**

(a) *Materials.* The materials shall be of best quality and suitable in every respect for the purpose intended. All materials shall be corrosion resistant. The use of acid flux in making joints shall not be permitted.

(b) *Workmanship.* The workmanship shall be first class in every respect.

**§ 161.006-4 Requirements.**

(a) *Corrosion-resisting materials.* Silver, corrosion-resisting steel, copper, brass, bronze and copper-nickel alloys are considered satisfactory corrosion-resistant materials within the intent of this subpart.

(b) *Searchlight parts.* The motor lifeboat searchlight shall, in general consist of the following parts:

Yoke and pedestal.

Housing.

Front door.

Reflector.

Lamp socket.

Supply cable.

(c) *Weight and dimensions.* The height of the motor lifeboat searchlight shall not exceed 19 inches and the weight shall not exceed 16 pounds, unless otherwise approved.

(d) *Wiring.* The motor lifeboat searchlight shall be wired with a five-foot length of rubber-jacketed hard service flexible cord, Underwriters' Laboratories, Inc., Type S, or equivalent, of a size not less than No. 16 AWG. At the point where the cable enters the searchlight, a waterproof entrance bushing with packing gland and cord grip shall be provided.

(e) *Lamp and socket.* The motor lifeboat searchlight shall be provided with a lamp of not less than 80 watts nor more than 100 watts, and a suitable lamp socket. Means shall be provided for adjusting and securing the lamp socket at any position between the focal point and a point not less than ¼ inch away from the focal point in either direction in the axis of the beam.

(f) *Housing.* The housing shall be constructed of brass, Federal Specification QQ-B-611, Composition E, copper alloy, or other suitable corrosion-resistant material as approved, of a thickness not less than No. 20 AWG. The housing shall be capable of free movement of at

least 60 degrees above and 20 degrees below the horizontal, and of a free movement of 360 degrees in a horizontal plane. It shall be possible to lock the barrel in any desired position, vertically or horizontally, without the use of tools. A sturdy metal hand grip shall be provided at the back of the housing for housing-adjusting purposes.

(g) *Front door.* A front door shall be attached to the housing in such a manner that it can be readily opened or removed, without the use of tools, for the purpose of relamping. The door, when closed, shall be waterproof. Clear front door glass shall be used.

(h) *Reflector.* The reflector shall be paraboloidal. It shall be constructed of brass, Federal Specification QQ-B-611 Composition E, finished and with electroplated coatings of nickel and chromium in accordance with ASTM B 456 (incorporated by reference, see § 161.006-1), Service Condition 1, or as otherwise approved. The reflector shall furnish a minimum average illumination of 100 foot candles, when measured as specified in § 161.006-5 (b) (2).

(i) *Yoke and pedestal.* The yoke and pedestal shall be of rugged construction. The pedestal shall be suitable for bolting to a flat surface with not less than four 3/8-inch diameter bolts.

(j) *Beam spread.* The beam shall be at least 60 feet in diameter at 200 yards. The edge of the beam shall be defined as a point at which the intensity of the light is 10 percent of the maximum intensity.

(k) *Bolts, nuts, and screws.* Bolts and nuts shall conform to the requirements of Navy Department Specification 43B11. Screws shall conform to the requirements of Navy Department Specification 42S5.

(l) *Name plate.* The motor lifeboat searchlight shall be provided with a permanent metallic name plate giving the name of manufacturer, type designation, and drawing number.

[CGFR 49-43, 15 FR 127, Jan. 11, 1950, as amended by USCG-1999-5151, 64 FR 67185, Dec. 1, 1999]

#### § 161.006-5 Sampling, inspections and tests.

(a) *General.* Motor lifeboat searchlights specified by this subpart are not

inspected at regularly scheduled factory inspections of production lots, but the Commander of the Coast Guard District may detail an inspector at any time to visit any place where such searchlights are manufactured to check materials and construction methods and to conduct such tests and examinations as may be required to satisfy himself that the searchlights are being manufactured in compliance with the requirements of this specification and with the manufacturer's plans and specifications approved by the Commandant.

(b) *Methods of test*—(1) *Waterproof test.* The searchlight shall be subjected for 5 minutes to a stream of water under a head of approximately 35 feet from a hose not less than 1 inch in diameter from a distance of approximately 10 feet. The hose nozzle shall be adjusted to give a solid stream at the enclosure. No leakage shall occur in this test.

(2) *Beam candlepower.* All light except that produced from the searchlight under test shall be excluded from the room in which measurements are made. The searchlight shall be operated at rated voltage with a seasoned lamp as specified in § 161.006-4(e). Measurements of beam candlepower shall be made at the corners of a 6-inch square located in the center of the beam at a distance of 32 feet immediately in front of the searchlight.

(3) *Corrosion resistance.* The searchlight shall be subjected to a 200-hour salt spray test in accordance with ASTM B 117 (incorporated by reference, see § 161.006-1). There shall be no evidence of corrosion that will be detrimental to the operation of the searchlight.

(4) *Heat run.* The searchlight, completely assembled, shall be operated continuously for 2 hours at rated voltage following which the waterproof test shall be conducted. This cycle shall be repeated 3 times. The ambient temperature shall be approximately 25 °C. The water stream shall be from an ordinary cold water tap.

[CGFR 49-43, 15 FR 127, Jan. 11, 1950, as amended by USCG-1999-5151, 64 FR 67185, Dec. 1, 1999]