(b) [Reserved]

### § 164.006–3 Construction, materials, and workmanship.

(a) It is the intent of this specification to obtain a deck covering made largely of incombustible materials with low heat transmission qualities which will produce a minimum of smoke when exposed to high temperatures.

(b) Deck coverings shall be of such a quality as to successfully pass all of the tests set forth in § 164.006–4.

### § 164.006–4 Inspection and testing.

(a) All tests shall be conducted at the National Bureau of Standards or other laboratories designated by the Coast Guard.

(b) *Smoke tests.* (1) A sample of each thickness submitted shall be tested for smoke emission. Each sample shall be laid on a ¼″ × 12″ × 27″ steel plate. Normal protective coatings and deck attachments shall be incorporated in the samples. Each sample shall be heated in a furnace whose temperature is limited to the standard decking curve reaching 1,325 degrees F. at the end of one hour. Smoke observations shall be made at intervals not greater than five minutes during the one-hour period of test.

(2) Instantaneous values of the percent of light transmission shall be calculated from the observations noted in paragraph (b)(1) of this section. A plot of light transmission values shall be made using straight lines between instantaneous values.

(3) Any instantaneous value of 10 percent light transmission or less shall be considered sufficient cause for rejection of a deck covering.

(4) Average values of light transmission shall be calculated for 15, 30, and 60 minutes. Averages shall be an arithmetic mean with values taken at one minute intervals from the plotted curve noted in paragraph (b)(2) of this section. If any of the three average values of light transmission is less than the values set forth below, it will be considered sufficient cause for rejection of a deck covering:

15 minutes—90 percent light transmission.
30 minutes—60 percent light transmission.
60 minutes—50 percent light transmission.

(c) *Fire resistance and integrity tests.* (1) A sample of each thickness submitted shall be tested for fire resistance and integrity. Each sample shall be laid on a ¼″ × 12″ × 27″ steel plate. Normal protective coatings and deck attachments shall be incorporated in the samples. Each sample shall be heated in a furnace whose temperature is controlled according to the standard fire exposure curve reaching 1,700 degrees F. at the end of one hour. Temperature of the unexposed side as indicated by a thermocouple under a 0.40 inch asbestos pad shall be observed at intervals not greater than 5 minutes during the one-hour period of test.

(2) Data from these tests shall be analyzed to determine the thicknesses necessary to limit the average temperature rise on the unexposed surface to 250 degrees F. above the original temperature at the end of 15, 30, and 60 minutes.

(3) Excessive cracking, buckling, or disintegration may be considered cause for rejection.

(d) *Organic carbon content test.* (1) The organic carbon content shall be determined and shall not exceed 0.12 gram per cubic centimeter of the molded deck covering.

(e) *Spot check tests.* (1) Deck coverings are not inspected at regularly scheduled factory inspections; however, the cognizant Officer in Charge, Marine Inspection, may detail a marine inspector at any time to visit any place where deck coverings are manufactured to conduct any inspections or examinations deemed advisable and to select representative samples for further examination, inspection or tests. The marine inspector shall be admitted to any place where work is done on deck coverings or component materials.

(2) Manufacturers of approved deck coverings shall maintain quality control of materials used, manufacturing methods, and the finished product so as to meet the requirements of this specification, and any other conditions outlined on the certificate of approval, but the Coast Guard also reserves the right to make spot-check tests of approved deck coverings at any time on samples selected by a marine inspector at the place of manufacture or samples obtained from other sources in the field.

The manufacturer will incur no expense for such tests, but the results shall be binding upon the approval of his product. The manufacturer will be advised in advance of the time of testing of the samples selected and may witness the tests if he so desires.

[CGFR 53–25, 18 FR 7874, Dec. 5, 1953, as amended by CGFR 61–15, 26 FR 9302, Sept. 30, 1961]

### § 164.006–5 Procedure for approval.

(a) If a manufacturer desires to have a deck covering approved, a request shall be presented to the Commandant of the Coast Guard, together with the following information:

(1) The trade name and designation of the deck covering.

(2) The range of thicknesses in which it is proposed to lay the deck covering together with any information the manufacturer may have as to maximum or minimum thicknesses.

(3) Description of method of attachment to or protection of the steel deck together with the trade name and designation of adhesive or protective coating if used.

(4) A sample of the molded deck covering at least 6 inches square and ¼ inch thick. This may or may not be attached to a backing material at the manufacturer's option.

(b) The material submitted will be examined and the manufacturer advised as to the number and thicknesses of samples to be submitted together with the estimated cost of the tests.

(c) If the deck covering is indicated as being suitable, the manufacturer shall then submit the following:

(1) Two samples of each thickness to be tested laid in the manner designated on a ¼″ × 12″ × 27″ steel plate for the purpose of the smoke test and fire resistance and integrity test noted in § 164.006–4 (b) and (c).

(2) Sufficient bulk material (unmixed) to lay a sample one inch thick on an area of 12″ × 27″. If an adhesive or protective coating is used, a liberal sample shall be supplied.

(3) If the manufacturer desires to witness the tests, he should so indicate at this time.

(4) A commitment that he will reimburse the National Bureau of Standards for the cost of the tests when billed by them.

(d) The above material will be submitted to the National Bureau of Standards by the Coast Guard for testing. The tests noted in § 164.006–4 will be conducted and a report submitted to the Coast Guard.

(e) A copy of the test report will be forwarded to the manufacturer and he will be advised if his material is approved under this specification, and if approved, in what thicknesses it may be laid, and in what thicknesses it must be laid to meet the requirements for Class A–60 decks without the use of any other insulating material. If approved, this information will be published in the FEDERAL REGISTER.

[CGFR 53–25, 18 FR 7874, Dec. 5, 1953, as amended by CGFR 61–62, 27 FR 180, Jan. 6, 1962]

## Subpart 164.007—Structural Insulations

SOURCE: CGFR 69–72, 34 FR 17498, Oct. 29, 1969, unless otherwise noted.

### § 164.007–1 Applicable specification and referenced material.

(a) *Specification.* The following specification of the issue in effect on the date of manufacture of the structural insulation shall form a part of the regulations of this subpart (see §§ 2.75–17 through 2.75–19 of subchapter A (Procedures Applicable to the Public) of this chapter:

(1) Coast Guard specification:

Subpart 164.009 of this part, Incombustible Materials for Merchant Vessels.

(b) *Guidance.* For guidance you may use the following technical reference: ASTM E 119–98, Standard Test Methods for Fire Tests of Building Construction and Materials. You may obtain it from The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959.

(c) *Copies on file.* A copy of the specification listed in paragraph (a) of this section shall be kept on file by the manufacturer, together with the certificate of approval and this specification. It is the manufacturer's responsibility to have the latest issue of the specification on hand together with the