

(iii) One thermocouple in way of or as close as possible to one of the pins or other through metallic connections (if any) used for holding the insulation in place.

(iv) Further thermocouples at the discretion of the testing laboratory or Coast Guard for the purpose of determining the temperature at points deemed likely to give a greater temperature rise than any of the above-mentioned thermocouples.

(2) The average temperature rise on the unexposed surface shall be obtained by averaging the readings of the thermocouples mentioned in paragraphs (f)(1) (i) and (ii) of this section.

(g) *Other observations.* Throughout the test observations shall be made of all changes and occurrences, which are not criteria of performance, but which may create hazard in case of a fire; for example the emission of appreciable volumes of smoke or noxious vapors from the unexposed side of the test specimen. The specimen shall be examined after the test for changes that have taken place and the information shall be noted in the test report.

(h) *Duration of testing.* The test shall be continued for at least one hour or until the maximum surface temperature rise values noted in §164.007-5(a) have been reached, whichever occurs later.

#### § 164.007-5 Test requirements.

The insulation value of the specimens for the full scale test shall be such that the average temperature of the thermocouples on the unexposed surface described in §164.007-4(f)(2) will not rise more than 139 °C. (250 °F.) above the initial temperature, nor will the temperature at any one point on the surface, including any through metallic connection, rise more than 181 °C. (325 °F.) above the original temperature at the end of 60 minutes. The results obtained on the small scale test 2'x2' (60 cm. x 60 cm.) shall be recorded.

#### § 164.007-6 Test report.

(a) The test report required shall contain at least the following:

- (1) Name of manufacturer.
- (2) Purpose of test.
- (3) Test conditions and date of test.

(4) Description of the panel tested giving the details of the assembly comprising a steel plate, insulation (thickness and density) spacer strips and fastening and the method of mounting the panel assembly in the test furnace.

(5) Complete time-temperature data, including initial temperature, for each thermocouple together with curves of average temperature for the unexposed surface of the insulation and the thermocouple recording the highest temperature. In addition, for §164.007-9(g)(2), complete time-temperature data consisting of a numerical time-temperature table for each furnace and each surface of insulation thermocouple together with the initial temperature of each thermocouple.

(6) A log maintained by the owner relative to deflections, cracking or loosening of the insulation, smoke or gas emission, glow, flame emission, and any other important data. The time of each observation should be noted.

(7) Photographs of both sides of the panel before and after testing.

(8) Summary of test results.

(b) [Reserved]

#### § 164.007-7 Analysis of results.

(a) When only one sample is tested, the results of the test shall be binding and no analysis by the Coast Guard will be undertaken.

(b) When more than one sample of the same density material is tested simultaneously and the results are not exact, the Coast Guard may analyze the results. Data from the tests may be analyzed to determine the minimum thickness to meet the requirements of §164.007-5(a).

(c) Consideration will be given to correction for inaccurate furnace control in accordance with §164.007-4(d)(4).

[CGFR 69-72, 34 FR 17498, Oct. 29, 1969; 34 FR 19030, Nov. 29, 1969]

#### § 164.007-8 Retests.

(a) Manufacturers of approved structural insulation shall maintain quality control of materials used, manufacturing methods, and the finished product utilizing appropriate quality control testing so as to meet the requirements of this specification, and any