



Chapter Sixteen

ASTM E-119 Two hour Wall Assembly

Standard Method of Fire Tests of Building Construction and Materials

Conducted by Southwest Research Institute, Sept. 2003

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September 8, 2003

Mr. Mike Van Etten
Forest City Development
949 South Hope Street, Suite 100
Los Angeles, California 90015

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Subject: SwRI® Project No. 01.06059.01.403, "Small-Scale Test"

FINAL REPORT
(Consisting of 37 Pages)

Dear Mr. Van Etten:

This letter and enclosures are submitted as the final report for the small-scale tests of two different wall assembly constructions utilizing NoFire Technologies, Inc., A18 intumescent coating. The tests were conducted at NoFire Technologies, Inc., located in Upper Saddle River, New Jersey on August 13 and August 14, 2003, in general accordance with ASTM E 119-00, "Standard Method of Fire Tests of Building Construction and Materials". Testing of both wall samples was witnessed by Michael Luna of Southwest Research Institute® (SwRI®). The results presented in this report apply only to the materials tested, in the manner tested, and not to any similar materials or material combinations.

The first wall assembly, referred to as Sample-1, was a 2 x 2-ft assembly constructed of 12 x 12 x 4-in clay tiles with 1/2-in. mortar joints. Both faces of Sample-1 had 3/4-in. gypsum plaster applied, and one face had 0.02-in. of NoFire A-18 intumescent coating applied onto the gypsum plaster. The top of Sample-1 was capped with lath and mortar. The face with the intumescent coating was exposed to the fire.

The second wall assembly, referred to as Sample-2, was a 2 x 2-ft assembly constructed of 12 x 12 x 4-in. clay tiles with 1/2-in. mortar joints. One face of Sample-2 had 3/4-in. gypsum plaster applied and the other face had 0.02-in. of NoFire A-18 intumescent coating applied onto the clay tiles. The top of Sample-2 was capped with lath and mortar. The face with the intumescent coating was exposed to the fire. Client provided drawings of the assemblies, and installation instructions are provided in Appendix A.

Instrumentation consisted of five thermocouples (TCs) on the unexposed face. The TCs were spaced with one approximately in the center of the sample and four at approximately the center of the sample's quarter sections.

The fire exposure for both Sample-1 and Sample-2 followed the temperature profile in accordance with ASTM E 119-00.

The exposure period for Sample-1 was 120 minutes. At no point during the test were flames visible on the unexposed face nor did the unexposed temperatures exceed the maximum allowable individual thermocouple temperature of 403°F or the allowable average thermocouple temperature of 328°F.

The exposure period for Sample-2 was 120 minutes. No flames were visible on the unexposed face, but the allowable average thermocouple temperature of 328°F was exceeded at 110 minutes. The maximum individual allowable temperature of 402°F was exceeded at 110 minutes 45 seconds. Appendix B contains the data recorded during the Sample-1 and Sample-2 tests.

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Enclosed please find photographic documentation on a compact disc for the above-referenced tests. If I can be of further assistance, please feel free to contact me by telephone (210) 522-2505, by fax (210) 522-3377, or by e-mail at mluna@swri.org.

Sincerely,



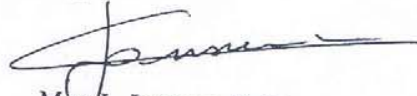
Michael Luna
Research Engineer
Fire Resistance Section

ML/jrt
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Enclosure: 1 Photo CD

cc: Record Copy A - Dept. File (w/o enclosure)
Record Copy B - IQS Dept. (w/o enclosure)

Approved:



Marc L. Janssens, Ph.D.
Director
Department of Fire Technology