

SOUTHWEST RESEARCH INSTITUTE™

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April 29, 2003

Mr. Scott Tonkinson
Bonded Logic, Inc.
411 East Ray Road
Chandler, AZ 85225

Subject: SwRI® Project No. 01.06649.01.001, ASTM E 119-00 Fire Resistance Test **PROJECT STATUS**
(Consisting of 2 Pages)

Dear Mr. Tonkinson:

A wall design utilizing Bonded Logic, Inc.'s UltraTouch insulation was tested in accordance with ASTM E 119-00, *Standard Test Methods for Fire Tests of Building Construction and Materials*. The insulation was received on March 26, 2003, and was tested on April 3, 2003, at Southwest Research Institute's® (SwRI®) Department of Fire Technology in San Antonio, Texas.

TEST SAMPLE

SwRI constructed the frame of the wall assembly with 2 x 4-ft wood studs spaced 16 in. on center. Both sides of the wall assembly were finished with one layer of 5/8-in. Type X gypsum wallboard secured with #6 drywall screws spaced 8 in. on center along the perimeter and 12 in. on center in the field. Bonded Logic, Inc.'s UltraTouch insulation material was installed in the stud cavities prior to finishing the wall assembly.

INSTRUMENTATION

A total of nine thermocouples (TCs) were provided on the unexposed surface of the wall assembly. TCs 1-9 were placed in a symmetric pattern on the unexposed surface to measure the heat transfer across the wall assembly. The conduct of the fire test is controlled according to the standard time/temperature curve, as indicated by the average temperature obtained from the readings of nine thermocouples (TCs) symmetrically located across the exposed face of the specimen at a distance of 6 in. The furnace temperature during a test is controlled such that the area under the time/temperature curve is within 10% of the corresponding area under the standard time/temperature curve for tests of 1 hr or less, 7.5% for tests less than 2 hr, and 5% for tests of 2 hr or more duration. A pressure probe was provided to monitor furnace pressure.

RESULTS

The wall assembly was exposed to the standard furnace conditions for 1 hr. The average unexposed surface temperature at the conclusion of the 60-min fire exposure was 203°F (representing a rise of 125°F above-ambient conditions). TC 3 recorded the highest single point temperature of 225°F at the conclusion of 60 min (representing a rise of 147°F above-ambient conditions). The wall resisted the passage of flames to the unexposed side.

A duplicate wall assembly of identical construction was tested on April 25, 2003 for the hose stream test. The duplicate assembly was tested for half of the full 1-hr exposure and immediately hose stream tested. In this instance, the duplicate wall assembly withstood the hose stream test for the specified time of 65 sec.

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CONCLUSIONS

The wall assembly was capable of resisting the passage of flames or gases hot enough to ignite cotton waste for a period of 1 hr. The wall assembly did not allow transmission of heat through the wall during the fire endurance test such as to raise the temperature on its unexposed surface more than 250°F above its initial temperature. The wall assembly also withstood the cooling and erosion effect of the hose stream test.

This interim letter is provided to demonstrate successful ASTM E 119-00 testing on the typical wall assembly utilizing Bonded Logic, Inc.'s UltraTouch insulation. A full report will be delivered as stated in the contract with Bonded Logic, Inc.

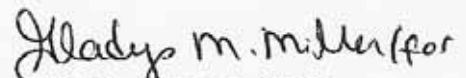
As always, it is a pleasure working with you. If you should have any questions or comments, or if I may be of further assistance, please do not hesitate to contact me by phone at (210) 522-2505 or by fax at (210) 522-3377, or e-mail to mluna@swri.edu.

Sincerely,



Michael Luna
Research Engineer
Fire Resistance Section

Approved:


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

ML/jrt

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