



ASTM E136
PERFORMANCE TEST REPORT

Report No.: F6825.01-121-24

Test Date: April 6, 2016

Rendered to:

CUPA PIZARRAS
Sobrado de Valdeorras, Ourense
Spain

PRODUCT TYPE: Slate Cladding Material
SERIES/MODEL: Cupa Pizarras Natural Slate

TEST METHOD: *ASTM E136-16, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C*

This report contains in its entirety:

Cover Page: 1 page
Report Body: 5 pages
Graphs: 4 pages
Photographs: 2 pages

1.0 Report Issued To: Cupa Pizarras
La Medua, S/N
Sobradelo de Valdeorras, Ourense 32330
Spain

2.0 Test laboratory: Architectural Testing, Inc., an Intertek company (“Intertek-ATI”)
130 Derry Court
York, Pennsylvania 17406-8405
717-764-7700

3.0 Test Method Information:

3.1 Introduction: Intertek-ATI was contracted by Cupa Pizarras to perform fire related performance tests on their “Slate Cladding Material” product. The purpose of the testing is to measure and observe the reaction of the material when subjected to 750°C temperatures inside of a furnace.

3.2 Procedure: Four 1.5 inch x 1.5 inch x 2 inch samples were conditioned in an oven set at 60°C for 24 hours prior to testing. The samples were then instrumented with two thermocouples. One was placed on the outside surface and the other thermocouple was placed inside the center of the sample. After instrumentation, the sample was placed into a vertical furnace consisting of an enclosed refractory tube surrounded by a heating coil with a cone-shaped airflow stabilizer. The furnace was set at 750°C exposure and samples exposed for 30 minutes. Observations and data were recorded.

4.0 Project Summary:

4.1 Product Type: Slate Cladding Material

4.2 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimen(s) were tested and evaluated against the requirements of the standard. A summary of the results is listed in the Test Results section and the complete graphical test data is included in Appendix A of this report.

4.3 Test Date: April 6, 2016

4.4 Ambient Conditions: 70.1°F and 43.4% RH

4.5 Test Location: Intertek-ATI test facility in York, Pennsylvania

4.6 Test Sample Source: The test material was supplied by the client. Representative samples of the test specimen will be retained by Intertek-ATI for a minimum of four years from the test completion date.

4.0 Project Summary: (Continued)

4.7 Test Method(s), Practices and/or Classifications:

ASTM E136-16, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C – (Option B)*

4.8 List of Official Observers:

<u>Name</u>	<u>Company</u>
Robert George	Intertek-ATI

5.0 Test Results & Observations:

Sample 1:

Test Requirements	Observation	Pass / Fail
Percentage of Mass Loss < 50%	Initial Mass = 204.9 grams <u>Final Mass = 200.6 grams</u> Mass Loss = 2.0%	N/A
Flaming of Material	None	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Interior	Initial Temp. = 750.0°C <u>Maximum Temp. = 747.2°C</u> Temperature Rise = -2.8°C	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Surface	Initial Temp. = 750.0°C <u>Maximum Temp. = 760.0°C</u> Temperature Rise = 10.0°C	Pass

Sample 2:

Test Requirements	Observation	Pass / Fail
Percentage of Mass Loss < 50%	Initial Mass = 217.1 grams <u>Final Mass = 212.6 grams</u> Mass Loss = 2.0%	N/A
Flaming of Material	None	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Interior	Initial Temp. = 750.0°C <u>Maximum Temp. = 741.5°C</u> Temperature Rise = -8.5°C	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Surface	Initial Temp. = 750.0°C <u>Maximum Temp. = 756.3°C</u> Temperature Rise = 6.3°C	Pass

5.0 Test Results & Observations: (Continued)

Sample 3:

Test Requirements	Observation	Pass / Fail
Percentage of Mass Loss < 50%	Initial Mass = 206.1 grams <u>Final Mass = 202.0 grams</u> Mass Loss = 2.0%	N/A
Flaming of Material	None	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Interior	Initial Temp. = 750.0°C <u>Maximum Temp. = 744.5°C</u> Temperature Rise = -5.5°C	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Surface	Initial Temp. = 750.0°C <u>Maximum Temp. = 756.9°C</u> Temperature Rise = 6.9°C	Pass

Sample 4:

Test Requirements	Observation	Pass / Fail
Percentage of Mass Loss < 50%	Initial Mass = 213.2 grams <u>Final Mass = 208.8 grams</u> Mass Loss = 2.0%	N/A
Flaming of Material	None	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Interior	Initial Temp. = 750.0°C <u>Maximum Temp. = 743.2°C</u> Temperature Rise = -6.8°C	Pass
Temperature Rise > 30°C above Initial Temperature of Sample Surface	Initial Temp. = 750.0°C <u>Maximum Temp. = 753.6°C</u> Temperature Rise = 3.6°C	Pass

6.0 Test Conclusion:

The material provided to Intertek-ATI from Cupa Pizarras and described in this report **did** meet the condition of acceptance of ASTM E136.

Intertek-ATI will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Intertek-ATI for the entire test record retention period.

Results obtained are tested values and were secured using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimens tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For INTERTEK-ATI:

Robert George
Project Engineer - Fire Testing

Matthew Freeborn
Manager – Fire Testing

REG/ddr

Attachments (pages) This report is complete only when all attachments listed are included.

Appendix A - Graphs (4)
Appendix B - Photographs (2)

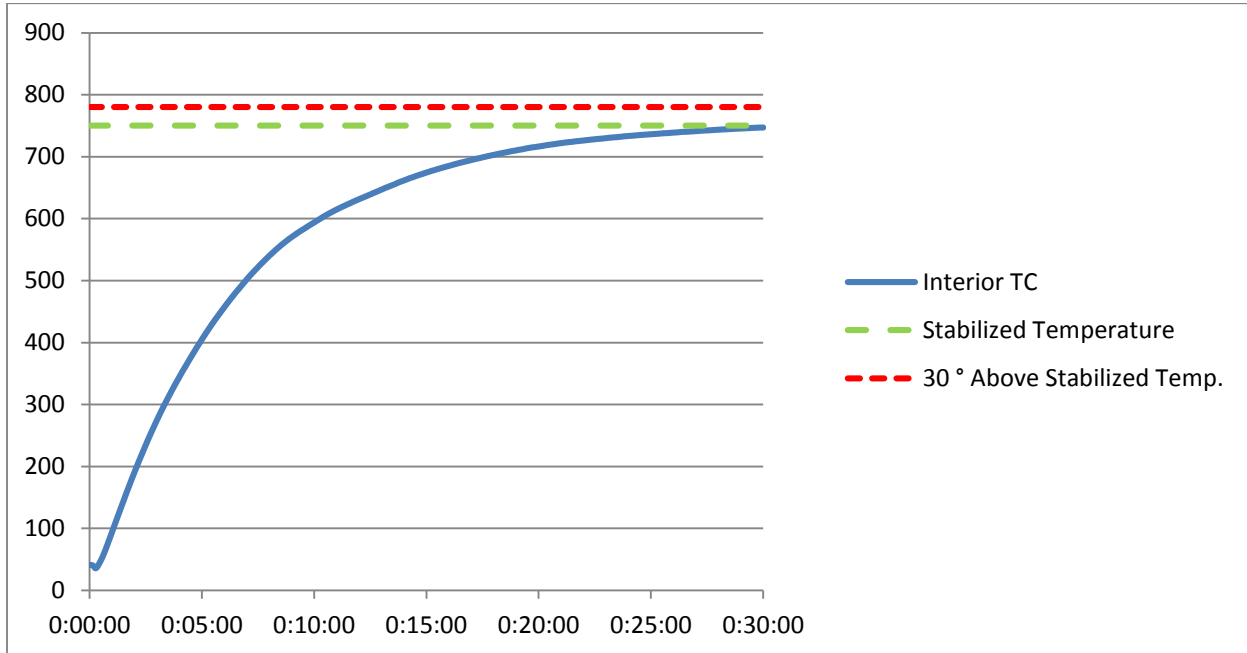
Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	04/13/16	N/A	Original report issue.

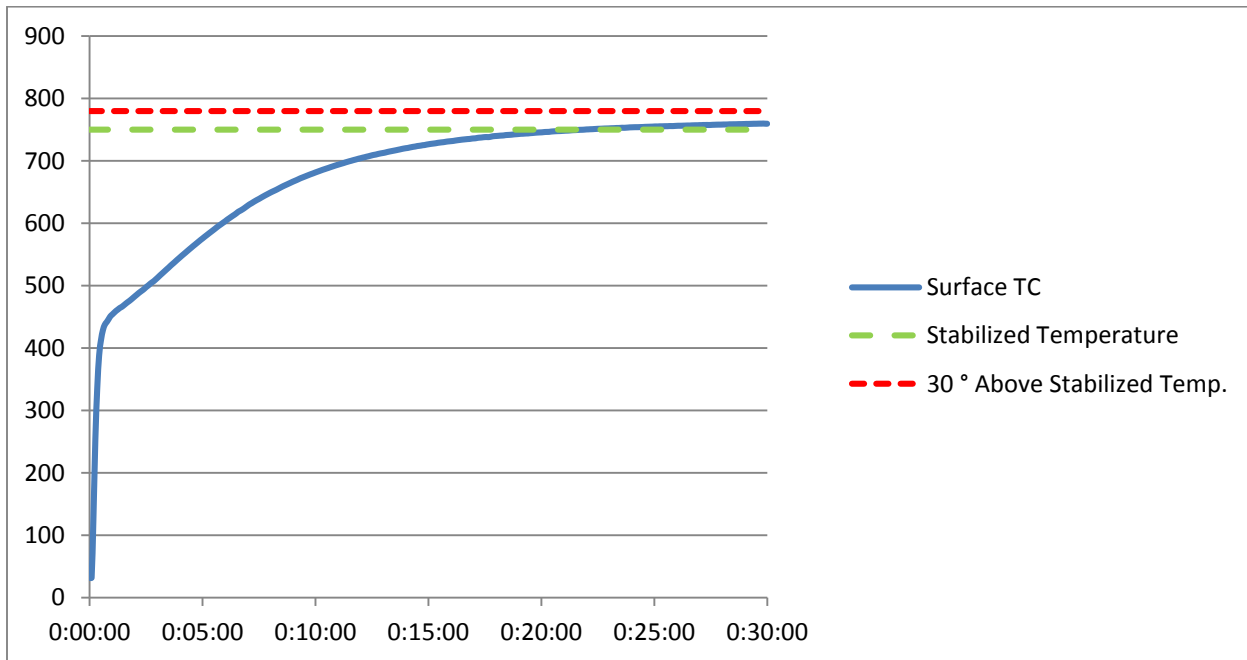
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APPENDIX A

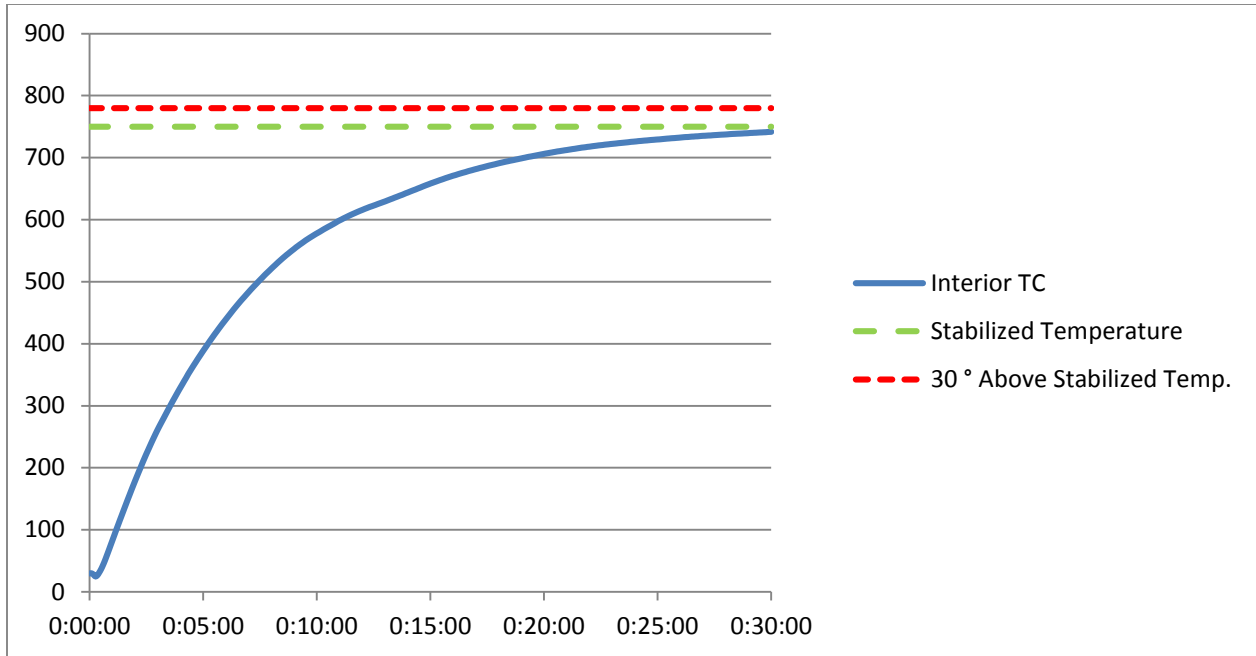
Graphs



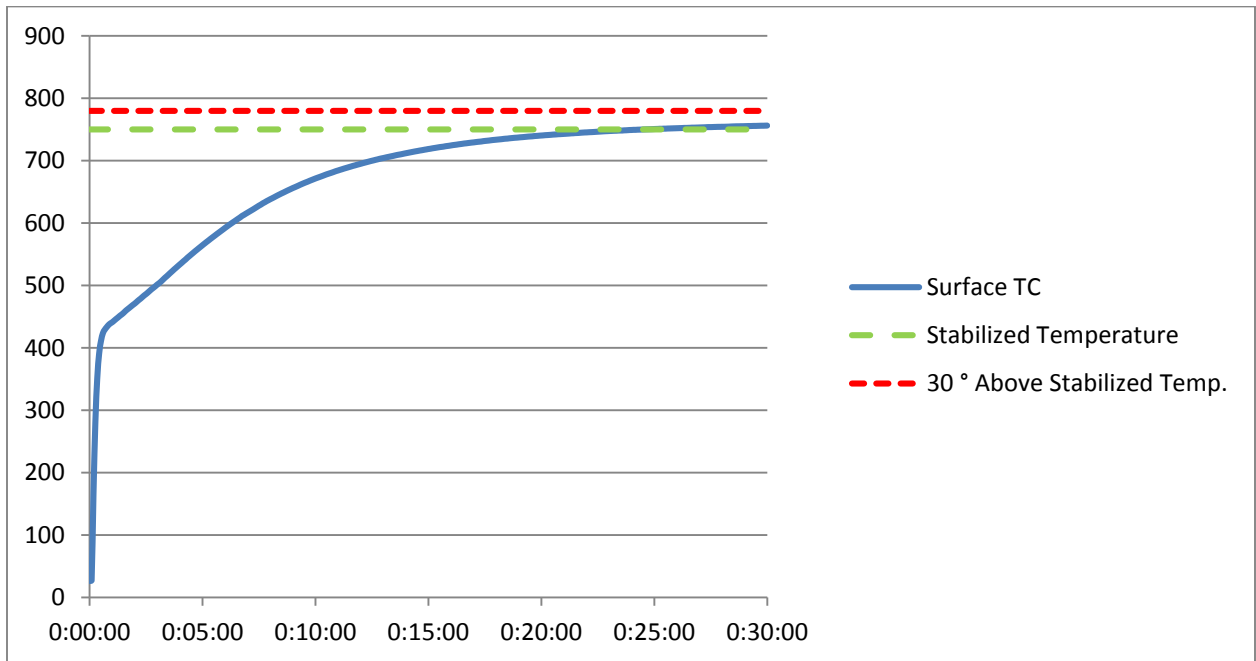
Interior Temperature Sample 1-1



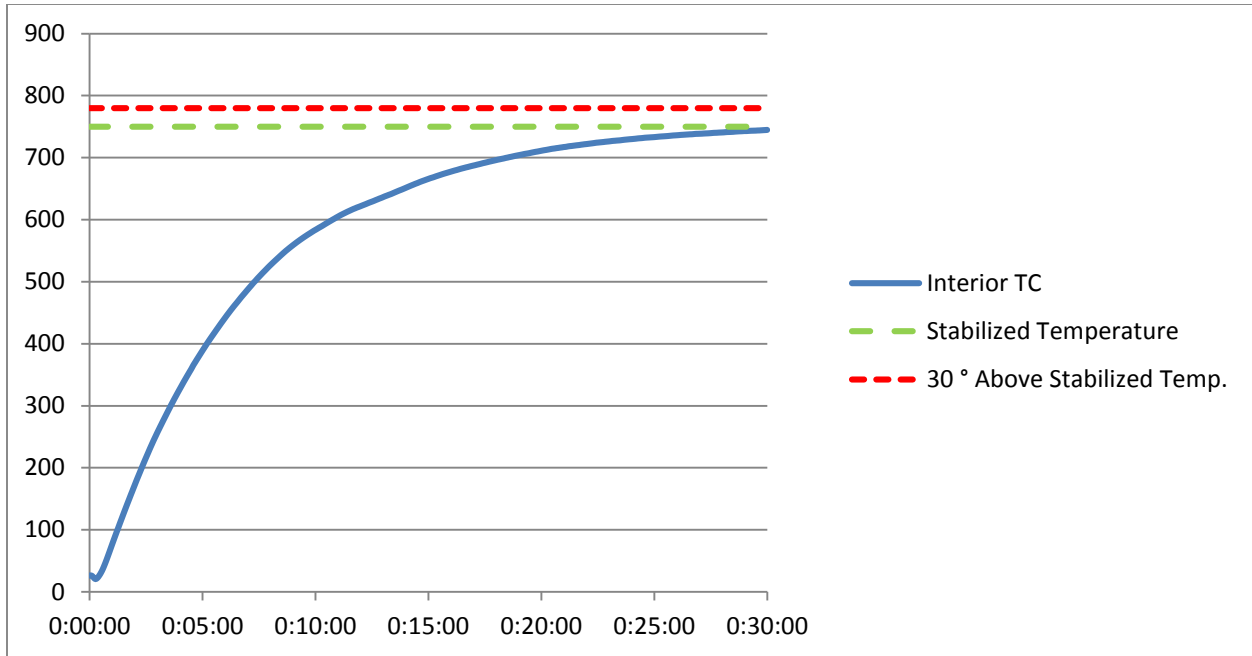
Surface Temperature Sample 1-1



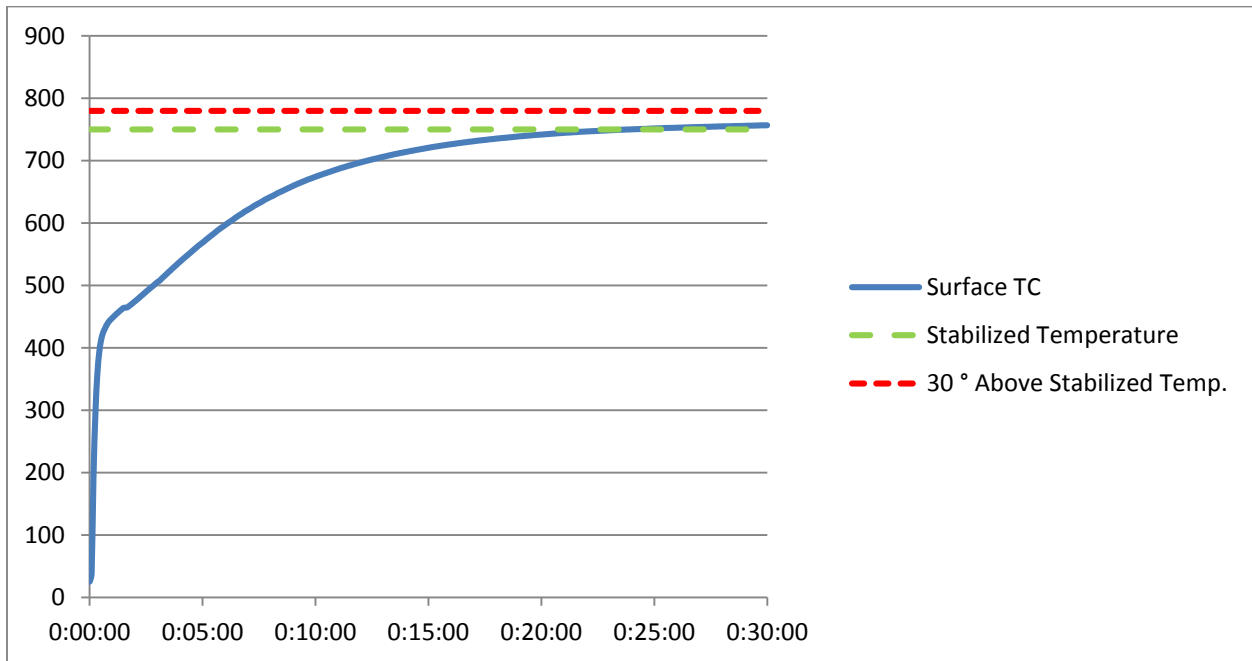
Interior Temperature Sample 1-2



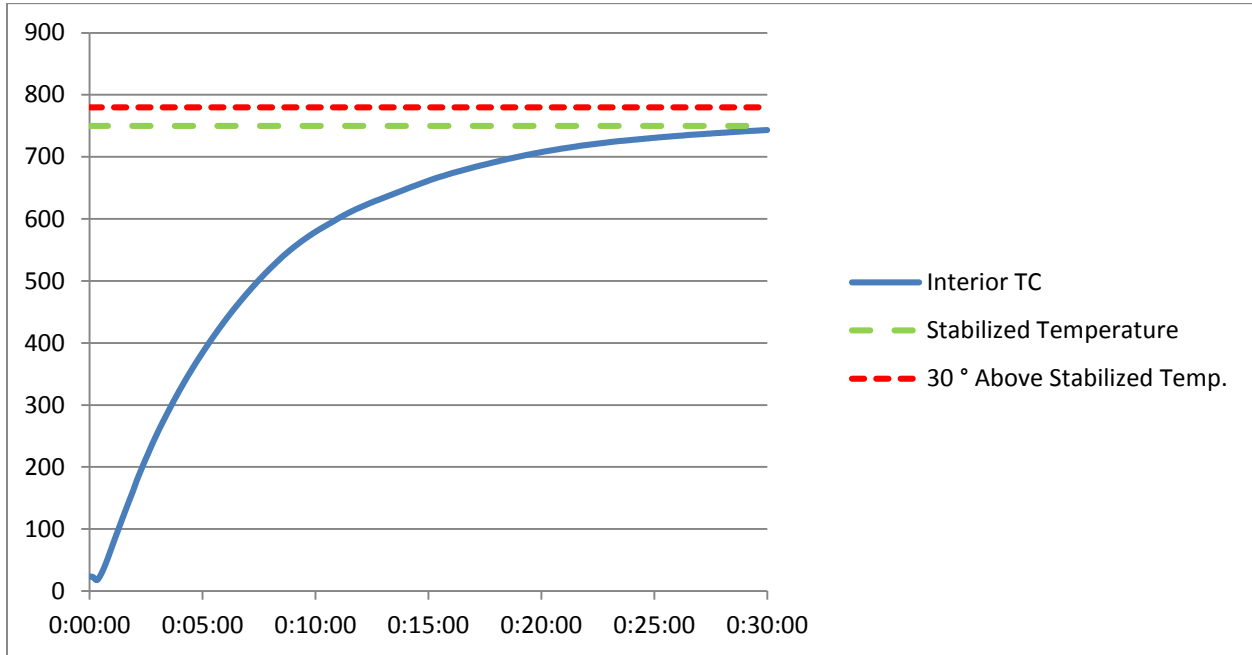
Surface Temperature Sample 1-2



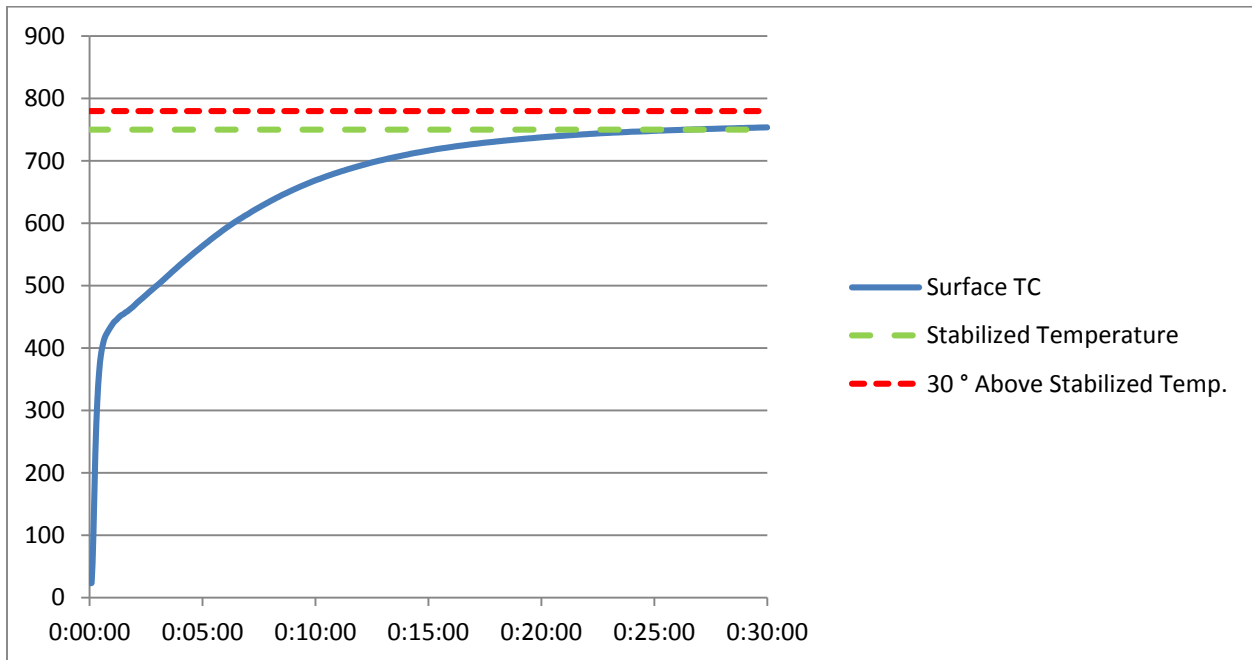
Interior Temperature Sample 1-3



Surface Temperature Sample 1-3



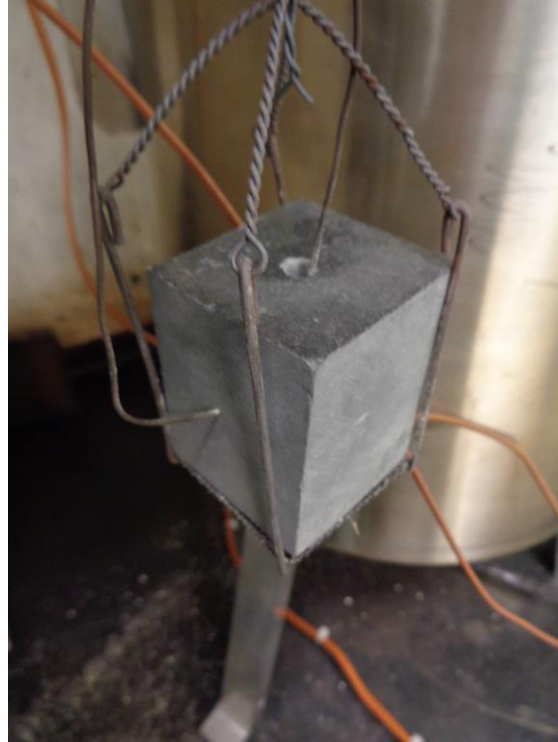
Interior Temperature Sample 1-4



Surface Temperature Sample 1-4

APPENDIX B

Photographs



**Photo No. 1
Test Specimen**



**Photo No. 2
Test Furnace Set-up**

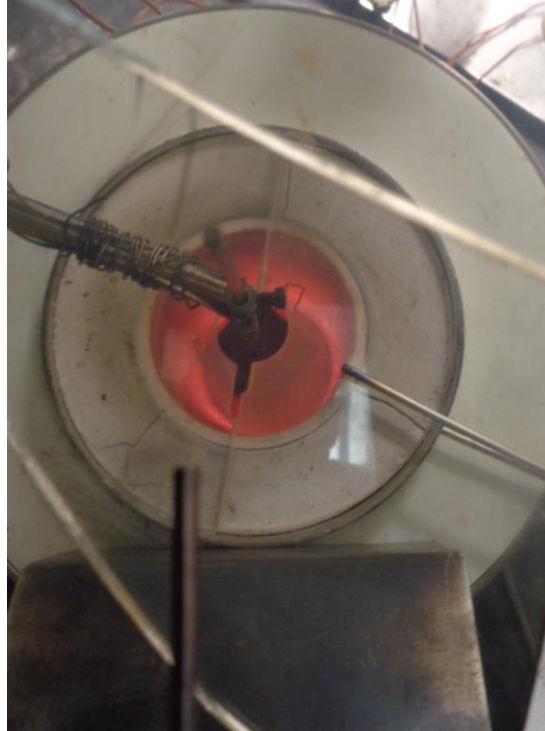


Photo No. 3
Typical Specimen (During Test)



Photo No. 4
Typical Specimen (Post-test)