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Stork Twin City Testing Corporation

662 Cromwell Avenue
Saint Paul, MN 55114
USA

Telephone :(651) 645-3601
Toll Free :(888) 645-TEST
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DATE: July 24, 2006

TESTING OF SURE CAVITY DRAINAGE SYSTEM

Prepared for:
Masonry Technology Incorporated
Attn: Mr. John Koester
24235 Electric Street
P.O. Box 214
Cresco, IA 52136-9635

Prepared By:

William E. Stegeman

William Stegeman
Project Manager
Product Evaluation Department
Phone: 651-659-7230

Reviewed By:

Steven R. Miller

Steven R. Miller
Laboratory Supervisor
Product Evaluation Dept.

The test results contained in this report pertain only to the samples submitted for testing and not necessarily to all similar products.

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TESTING OF SURE CAVITY DRAINAGE SYSTEM

INTRODUCTION:

This report presents the results of Drainage Efficiency tests conducted on samples of Sure Cavity Drainage System. The testing was authorized by Mr. John Koester of Masonry Technology Incorporated on May 15, 2006. The testing and data analysis were completed on July 13, 2006.

The scope of our work was limited to conducting Drainage Efficiency tests on the samples submitted and reporting the results.

SUMMARY OF RESULTS:

Wall ID	Time to Stop Draining, hr	Observations
A	>3:30	Wall did not drain but absorbed the water. After 3 ½ hours still wet as water bleeds through scratch coat
B	00:01:40	Dripping stopped and wall starting to dry
C	00:02:45	Dripping stopped and wall starting to dry
D	00:05:00	Dripping stopped and wall starting to dry
E	00:02:30	Dripping stopped and wall starting to dry

Dripping stopped is defined as less then one drop in 30 sec.

SAMPLE IDENTIFICATION:

The samples were identified as A through E. Construction details follow. Walls were assembled May 24-26, 2006.

WALL A Configuration, by layers

1. Plywood
2. “Double D” Paper
3. Metal Lath
4. Scratch Coat
5. ½” Vented Weep Screed

WALL B Configuration, by layers

1. Plywood
2. “Double D” Paper
3. 3/16” SURE CAVITY
4. Metal Lath.
5. Scratch Coat
6. ½” Vented Weep Screed

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WALL C Configuration, by layers

1. Plywood
2. "Double D" Paper
3. 3/16" SURE CAVITY
4. WOW Weep
5. Brick Mold Detail
6. Metal lath
7. Scratch Coat

WALL D Configuration, by layers

1. Plywood
2. "Double D" Paper
3. 10mm SURE CAVITY
4. Metal lath
5. Scratch Coat
6. ½" Vented Weep Screed

WALL E Configuration, by layers

1. Plywood
2. "Double D" Paper
3. 10mm SURE CAVITY
4. Wow Weep
5. Brick Mold Detail
6. Metal Lath
7. Scratch Coat

TEST METHOD:

The samples were constructed and then allowed to cure at standard room temperature of 72 ± 5°F for at least 28 days prior to testing. Testing was done according to proposed ASTM Standard "Standard Test Method for Determining the Drainage Efficiency of an Interior Drainage System of an Exterior Wall when a Scratch Coat of Mortar is Placed Against the Drainage System During the Construction Phase". Funnel cavity volume was determined to be 2.344 gallons and therefore the amount of water to use (3/4 of funnel volume) was 6.65Kg.

CALIBRATED TEST EQUIPMENT:

Sartorius Balance, model CISLI-U, ID PT 161-012, calibrated 3/06

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UNCALIBRATED TEST EQUIPMENT and SUPPLIES:

Holcim Mortar Mix
Jumbo Tex Weather-Resistive Barrier
Stopwatch
Workforce 16' tape measure
Dewalt variable speed cordless drill/driver
Assorted hand tools
Lumber and general hardware

TEST DATA:

Wall A
First Test 6-23-06
No water leaked from the bottom of the wall. Most of the water leaked through the seam between the edges of the wall and the frame. Observation Holes in the back of the wall: No moisture in the center row of holes. Moisture in outside rows of holes weeped around the edges of the DD paper.

Second Test 7-3-2006

Elapsed Time	Observations
2:32	Water dripping from weep holes in bottom center of wall.
7:00	¾" of water left in trough. Water weeping through scratch coat at top of wall.
11:30	Trough empty, ¾ to 1 cup of water missed catch pan.
15:00	1550g of water collected.
35:00	Slight drying at top center of wall. Full wet at ¾ of the way up the wall.
50:00	Front of wall dampness the same. 1 layer of paper removed from the rear of wall, no dampness between the layers of paper.
60:00	2/3 of the way up the wall, water is still bleeding through the scratch coat.
3:30:00	At 3 ½ hours, wall still wet.

WALL B
Test 7-3-2006

Elapsed Time	Observations
0:10	Water dripping from weep holes in bottom of wall.
0:50	Trough empty.
1:40	Done dripping.
3:30	Small wet spots at top of wall starting to dry.
15:00	Small wet spots all drying. 5095g of water collected, ¼ to ½ cup missed collection pan.
35:00	All wet spots drying.
2:55:00	At 2 hours 55 minutes, wall nearly dry.

WALL C
Test 7-3-2006

Elapsed Time	Observations
0:10	Water dripping from weep holes in bottom of wall.
0:37	Trough empty.
2:45	Done dripping. No moisture observed in observation holes in back of wall.
15:00	5566g of water collected, ¼ cup missed collection pan.

WALL D
Test 7-3-2006

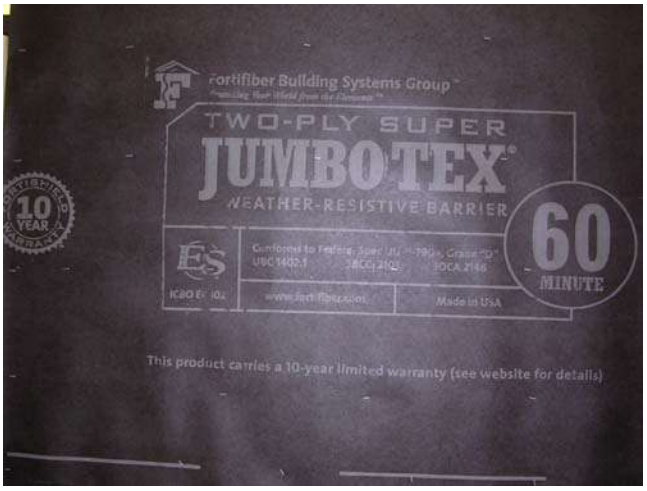
Elapsed Time	Observations
0:03	Water dripping from weep holes in bottom of wall.
0:07	Trough empty.
5:00	Done dripping. No moisture observed in observation holes in back of wall.
15:00	5915g of water collected.

WALL E
Test 7-3-2006

Elapsed Time	Observations
0:02	Water dripping from weep holes in bottom of wall.
0:20	rough empty.
2:30	Done dripping. No moisture observed in observation holes in back of wall.
15:00	5995g of water collected, just a negligible amount missed the collection tray.

PHOTOS:

Base Wall Unit



Double D Paper

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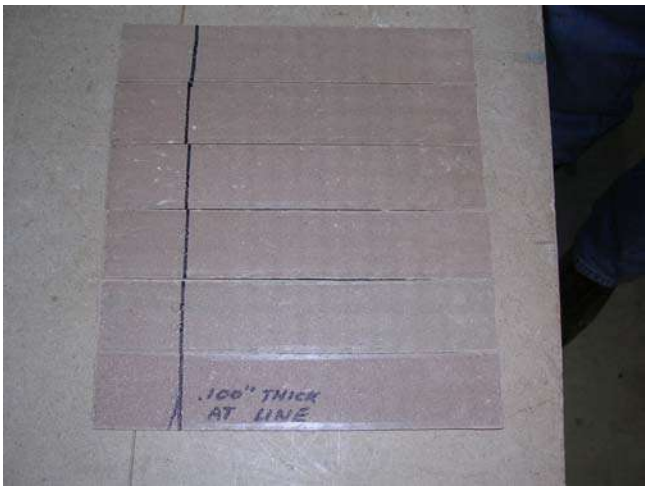
PHOTOS Continued:

Wall A with Paper and trough

Wall A with Metal Lathe



Spacers

Spacers in Trough between paper and metal lathe

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PHOTOS Continued:

Application of Scratch Coat

Sure Cavity Wall

Wall A first test

Water running along outside edge of Wall A on first test

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PHOTOS Continued:

Wall A mid test

Water running from back weep hole of Wall A

Top Trough view

Water dripping into collection pan

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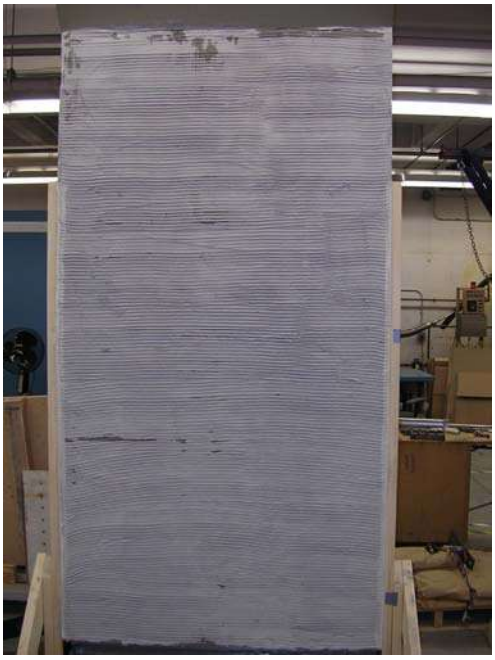
PHOTOS Continued:



Sure Cavity Wall

Wall A

REMARKS:

The test materials not consumed in testing will be retained for 14 days from the date of this report and then discarded unless we receive written notification requesting otherwise.

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