TEST REPORT

Report No.: C5106.01-801-44

Rendered to:

DESIGN DYNAMICS, INC.
Dallas, Texas

PRODUCT TYPE: Metal Wall Panel System
SERIES/MODEL: Flush-Panel 12", 24 Gauge Steel
Manufacturer: Peterson Aluminum Corporation

<table>
<thead>
<tr>
<th>Title</th>
<th>Summary of Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Infiltration</td>
<td>0.3 L/s/m² (0.06 cfm/ft²)</td>
</tr>
<tr>
<td>Static Water Penetration Resistance Test Pressure</td>
<td>968 Pa (20.22 psf)</td>
</tr>
<tr>
<td>Dynamic Water Penetration Resistance Test Pressure</td>
<td>968 Pa (20.22 psf)</td>
</tr>
</tbody>
</table>

Reference must be made to Report No. C5106.01-801-44, dated 05/06/13 for complete test specimen description and detailed test results.

Test Dates: 04/22/13
Report Date: 05/06/13
1.0 Report Issued To: Design Dynamics, Inc.
17772 Preston Road, Suite 204
Dallas, Texas 75252

2.0 Test Laboratory: Architectural Testing, Inc.
2865 Market Loop
Southlake, Texas 76092
(817) 410-7202

3.0 Project Summary:

3.1 Product Type: Metal Wall Panel System

3.2 Series/Model: Flush-Panel 12”, 24 Gauge Steel

3.3 Manufacturer: Peterson Aluminum Corporation

3.4 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. Test specimen description and results are reported herein.

3.5 Test Dates: 04/22/2013 – 04/22/2013

3.6 Test Record Retention End Date: All test records for this report will be retained until May 06, 2017.

3.7 Test Location: Architectural Testing, Inc. test facility in Southlake, Texas.

3.8 Test Sample Source: The test specimen was provided by the client. Representative samples of the test specimen will be retained by Architectural Testing for a minimum of four years from the test completion date.

3.9 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix A. Any deviations are documented herein or on the drawings.

3.10 List of Official Observers:

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom Shingler</td>
<td>Design Dynamics, Inc.</td>
</tr>
<tr>
<td>Tony Brown</td>
<td>Architectural Testing, Inc.</td>
</tr>
</tbody>
</table>

www.archtest.com
4.0 Test Method(s):


5.0 Test Specimen Description:

5.1 Product Sizes:

<table>
<thead>
<tr>
<th>Overall Area:</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.9 m² (64.0 ft²)</td>
<td>millimeters</td>
<td>inches</td>
</tr>
<tr>
<td>Overall size</td>
<td>2438</td>
<td>96</td>
</tr>
<tr>
<td>Panel size</td>
<td>305</td>
<td>12</td>
</tr>
</tbody>
</table>

5.2 Weatherstripping: No weatherstripping was utilized.

5.3 Drainage:

<table>
<thead>
<tr>
<th>Drainage Method</th>
<th>Size</th>
<th>Quantity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drip ledge</td>
<td>96&quot; wide</td>
<td>1</td>
<td>Under panel bottom full length</td>
</tr>
</tbody>
</table>

5.4 Hardware: No hardware was utilized.

5.5 Reinforcement: No reinforcement was utilized.

5.6 Metal Thicknesses:

<table>
<thead>
<tr>
<th>Material</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgirt</td>
<td>Steel</td>
</tr>
<tr>
<td>Jamb angle</td>
<td>Steel</td>
</tr>
<tr>
<td>Drip ledge</td>
<td>Steel</td>
</tr>
<tr>
<td>Panel</td>
<td>Steel</td>
</tr>
<tr>
<td>End-wall trim</td>
<td>Steel</td>
</tr>
</tbody>
</table>
5.0 Test Specimen Description: (Continued)

5.7 Panel Construction:

Horizontal subgirts at top, bottom and midpoint were anchored to stud wall with #10 x 1-1/2" hex head screws 1" from ends and 12" on center thereafter. Top and bottom subgirt wrapped onto exterior side of top plate and sol plate and anchored with #10 x 1" hex head screws 2" from corners, and 12" on center thereafter. Steel angles were lapped over the subgirt ends along jambs full length, and anchored with 12" x 1" flat head screws at each subgirt, and to the exterior side of the stud wall with #10 x 1" hex head screws 2' from corners, and 12" on center thereafter. A steel drip ledge was anchored to bottom subgirt with a 12" x 1" flat head screw 1" from ends and 12" on center thereafter. Panels were anchored to subgirts with #12 x 1" flat head screws. Panels were installed sequentially from left jamb as viewed from exterior. Subsequent panels were inserted into previous panels in a vertical standing seam and anchored along trailing lip to subgirts. A vertical steel end-wall trim was installed along jamb full length. The end-wall trim was anchored to the edge panel with a #14 x 7/8" hex head screw with gasketed washer 2" from corners and 12" on center thereafter. A horizontal steel end-wall trim was installed along head full length and lapping over jamb end-wall trim. The angle was anchored to the top ends of panels with a #14 x 7/8" hex head screw with gasketed washer 2" from corners and 12" on center thereafter. The end-wall trim was anchored to the lateral face of the buck with #14 x 1" hex head screw with gasketed washer 2" from corners and 12" on center thereafter along jambs and head.

6.0 Installation:

The specimen was installed onto a Spruce-Pine-Fir 2 x 6 nominal stud wall. Stud wall was sheathed with 5/8" plywood, and then covered with ice & water barrier. Assembled wall specimen was set into steel test chamber rough opening with a 1/2" shim space full perimeter. Specimen was sealed exterior full perimeter with polyurethane. Shim cavity filled with expanding foam interior full perimeter.

<table>
<thead>
<tr>
<th>Location</th>
<th>Anchor Description</th>
<th>Anchor Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jambs</td>
<td>3/8&quot; x 4&quot; lag screws</td>
<td>10&quot; from end and 12&quot; on center thereafter</td>
</tr>
</tbody>
</table>
7.0 Test Results: The temperature during testing was 19°C (67°F). The results are tabulated as follows:

<table>
<thead>
<tr>
<th>Title of Test</th>
<th>Results</th>
<th>Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Leakage,</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>per ASTM E 283</td>
<td>0.3 L/s/m²</td>
<td>Report only</td>
</tr>
<tr>
<td>at 300 Pa (6.2 psf)</td>
<td>(0.06 cfm/ft²)</td>
<td></td>
</tr>
<tr>
<td><strong>Water Penetration,</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>per ASTM E 331 at 968 Pa (20.22 psf)</td>
<td>No leakage</td>
<td>No leakage</td>
</tr>
<tr>
<td><strong>Water Penetration,</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>per AAMA 501.1 at 968 Pa (20.22 psf)</td>
<td>No leakage</td>
<td>No leakage</td>
</tr>
</tbody>
</table>

**General Note:** All testing was performed in accordance with the referenced standard(s).

Architectural Testing 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 Architectural Testing, Inc. for the entire test record retention period.

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 specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.

Tony Brown
Technician

Andy Cost
Laboratory Manager

TB:hd

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

Appendix-A: Drawings (9)
Appendix A

Drawings
Architectural Testing

Test sample contains with these details.
Designations are noted.

Report: (510E.0)
Date: 5-8-13
Tech: TB

TEST CHAMBER BASE
PETERSEN ALUMINUM CORPORATION
ATI TEST CHAMBERS
APPLICATION OF 5/8" PLYWOOD W/ 30 MIL WR GRACE ICE AND WATER SHEILD
Architectural Testing

Test sample complies with these details. Deviations are noted.

Report # C.5106.01
Date 5/14/13 Tech T0
Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# C 51012.01
Date 5/8/13  Tech T18

12" FLUSH PANEL SETUP
PETERSEN ALUMINUM CORPORATION
ATI TEST CHAMBERS

DRAWN BY: GNEWCOB  DATED  2-6-2013  DRAWING NO.: 5

design dynamics, Inc.
17772 Preston Rd., Suite 204
Dallas, Texas 75252
Phone: (972) 740-6680
designdynamics04@atol.com
### Architectural Testing

Test sample complies with these details. Deviations are noted.

- Report #: C6106-01
- Date: 5/1/13  
- Tech: TB

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### 12" FLUSH PANEL DETAILS

PETERSEN ALUMINUM CORPORATION

ATI TEST CHAMBERS

**Drawn By:** C. NEWCOMB  
**Date:** 2-6-2013  
**Drawing No.:** 7  
**Rev.:** 1
SUBGIRT A

SUBGIRT B

SUBGIRT C