



Farabaugh Engineering and Testing Inc.

Project No. T260-15

Report Date: September 14, 2015

Total Pages: 7 (inclusive)

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PERFORMANCE TEST REPORT

ASTM E-283-04 AIR LEAKAGE TEST ASTM E331-00 WATER PENETRATION TEST

ON

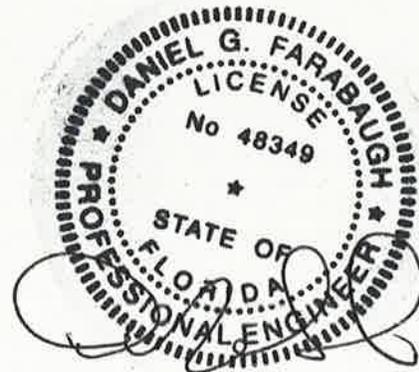
HWP PRECISION SERIES

FOR

PETERSEN ALUMINUM CORP.
10551 PAC ROAD
TYLER, TX. 75707

Report Prepared By:


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Reviewed and Approved By:


Daniel G. Farabaugh



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Purpose

The purpose of this test is to establish air and water infiltration rates on the test specimen mock-up in accordance with the referenced test standards and as provided herein.

Referenced Test Standards

- ASTM E 283-04 "Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen"
- ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"

Test Specimen

Manufacturer: Petersen Aluminum
10551 PAC Rd.
Tyler, TX. 75707

Panel Series: HWP Precision Series

Panel Tested: HWP 12-B Wall Panel, 12"(nominal) Panel Width, 24 Ga. Steel

Panel Clip 20 ga. x 2.5" wide clip.

Test Specimen

The test specimen consisted of a HWP Precision Series Panel (12" wide x 24ga.) mock-up. The mock-up measured 8'-0" wide x 8'-0" high which consisted of a 8 panel high system with support spacing of 1' - 4" o.c. The mock-up consisted of 18 ga. supports with 5/8" plywood, waterproof underlayment and 24 ga. panels. The 18 ga. supports were spaced at 1'-4" o.c. attached to a top and bottom 18 ga. support. The plywood was 5/8" thick plywood sheets attached with #14 - 13 X 2" long flat head self drilling fasteners into the 18 ga. supports. The fasteners for the plywood were at 6" o.c. on each vertical supports and horizontal supports. A layer of Grace Ice and Water Shield (waterproof underlayment) covered the plywood and the perimeter was sealed with silicone sealant. The 24 ga. panels were then installed horizontally using a 20 ga clips spaced at 2'-0" o.c.. The clip fasteners were (2) #14 - 13 x 2" long flat head concealor fasteners. The starter panel and final panel was attached with #10 - 14 x 1-1/2" long high low fasteners spaced at approximately 2'-0" o.c. The exposed screw heads were sealed with silicone sealant. The perimeter of the panels were sealed to the buck using silicone sealant. See attached drawing for specimen details.

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HWP PRECISION SERIES
HWP 12-B WALL PANEL MOCK-UP
TEST RESULTS

Date: 9/11/15

Ambient Temperature = 80 deg. F

Barometric Pressure = 29.88"Hg

ASTM E-283-04
AIR LEAKAGE TEST

TEST PRESSURE (PSF)	TOTAL AIR LEAKAGE RATE (CFM)	AIR INFILTRATION RATE (CFM/SF)	AIR INFILTRATION RATE (CFM/LF)
1.57	0.000	0.000	0.000
6.24	0.000	0.000	0.000
20.00	0.0042	0.00006	0.00008

Based on 64 sq.ft. and 56 lineal feet

ASTM E-331-00
WATER PENETRATION TEST

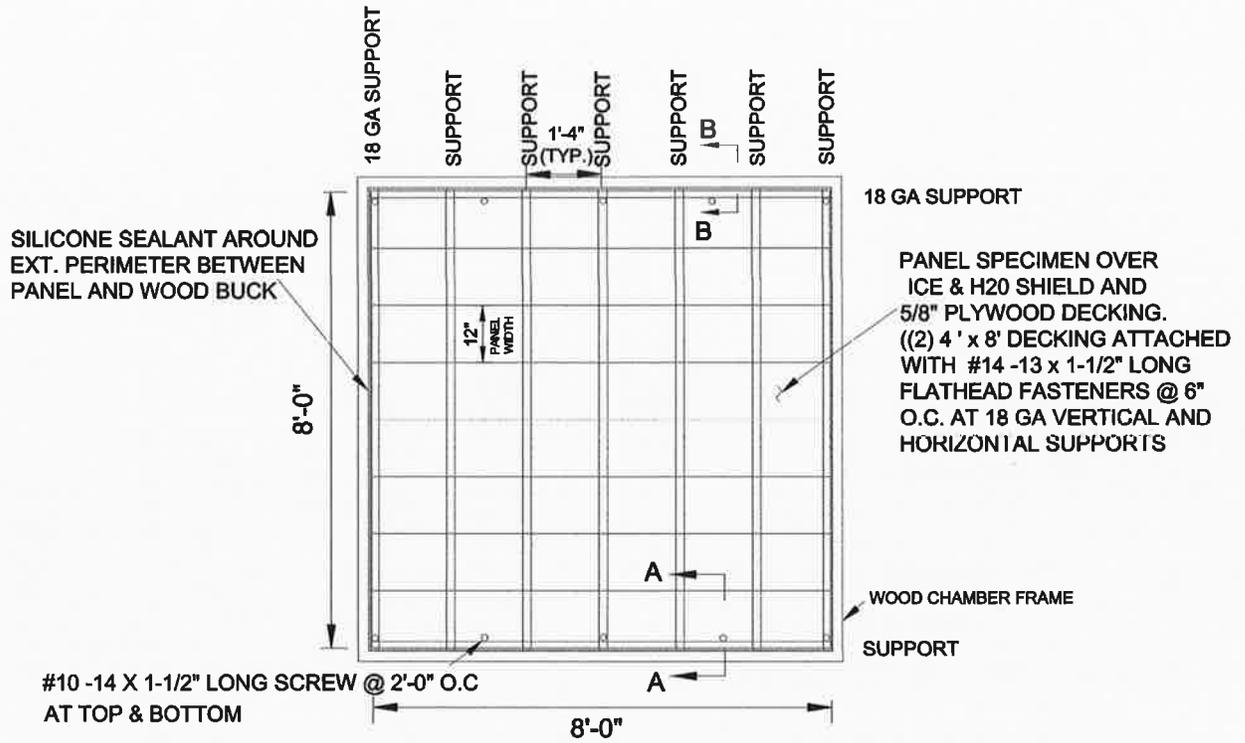
TEST PRESSURE (PSF)	WATER SPRAY RATE GAL/SF/HR	TEST DURATION (MIN)	RESULTS
6.24	5	15	PASS - NO VISIBLE LEAKAGE
12.00	5	15	PASS - NO VISIBLE LEAKAGE
20.00	5	15	PASS - NO VISIBLE LEAKAGE

NOTE: MOCK-UP WAS IN HORIZONTAL POSITION FOR THE PANELS.

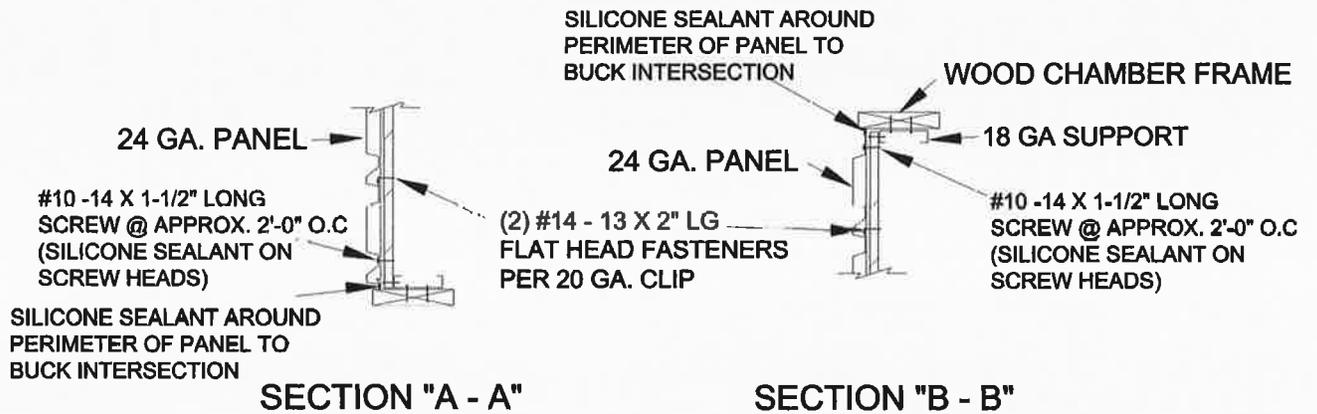
Results

Upon completion of the pressures noted above there were no noticeable failures of the specimen

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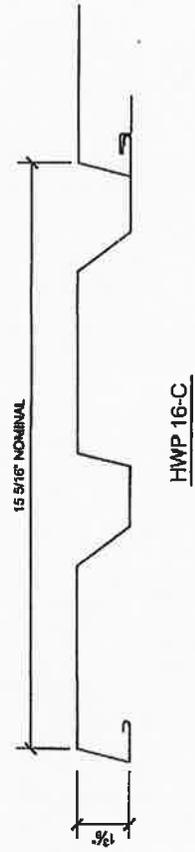
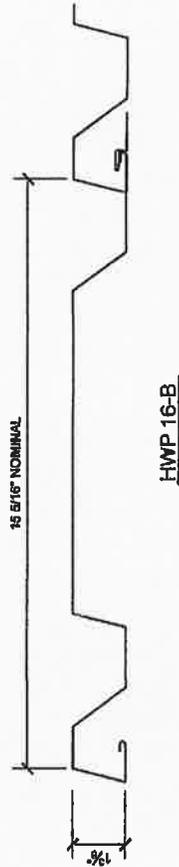
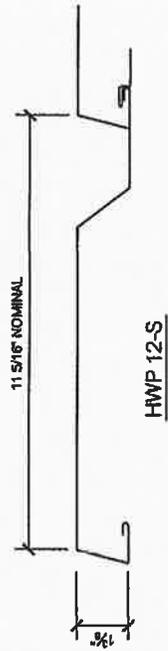


PLAN VIEW OF PANELS

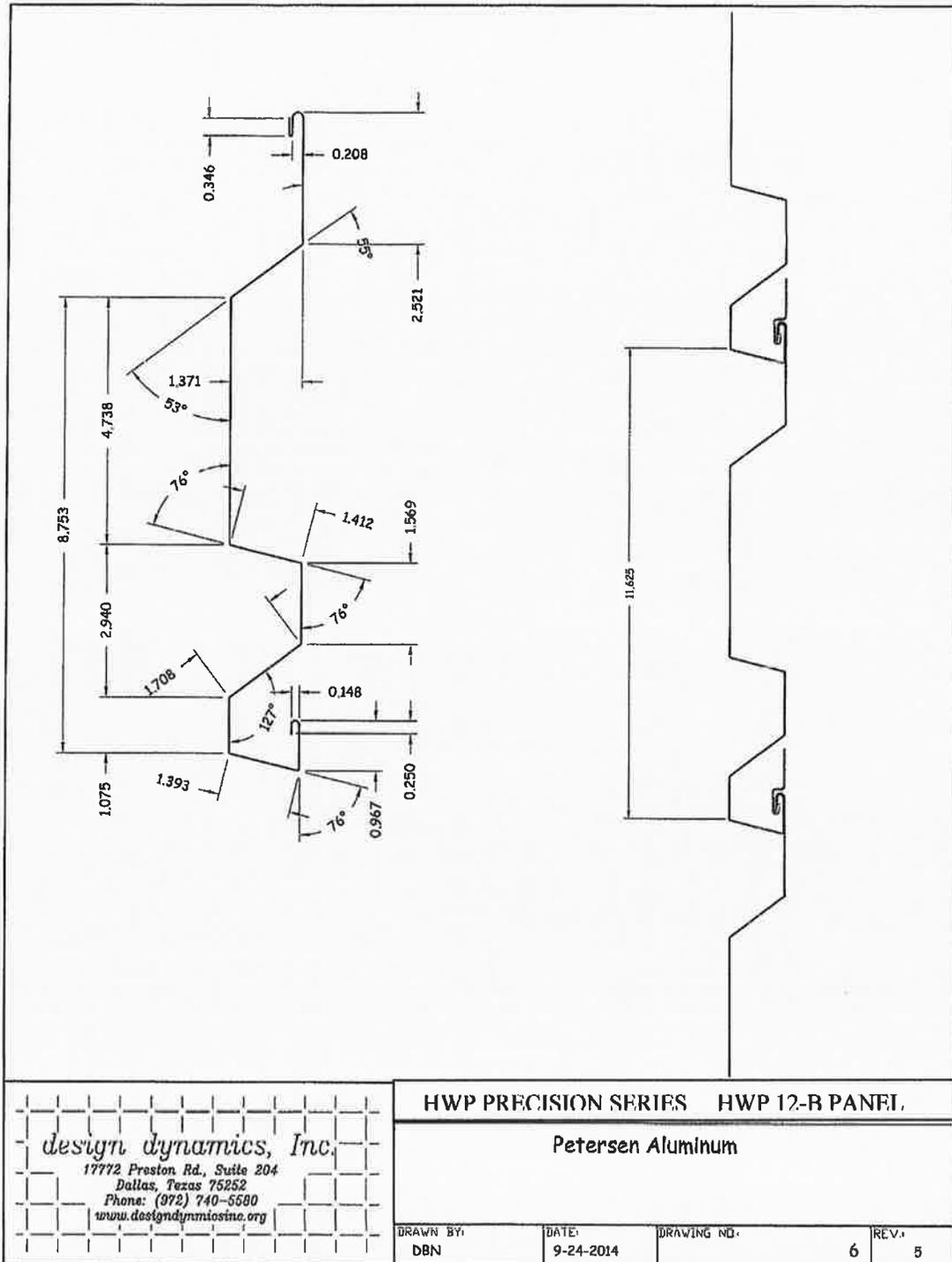


HWP PRECISION SERIES
N.T.S.

PANEL TESTED - >



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design dynamics, Inc.

17772 Preston Rd., Suite 204
 Dallas, Texas 75252
 Phone: (972) 740-5580
 www.designdynamicsinc.org

HWP PRECISION SERIES HWP 12-B PANEL

Petersen Aluminum

DRAWN BY:
DBN

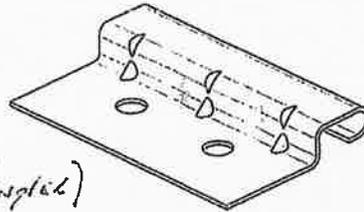
DATE:
9-24-2014

DRAWING NO.:

REV. 6 5

CUSTOMER APPROVAL:
 My signature on this print indicates approval of all the information shown (or as amended hereon) and that items made to these specifications will be accepted

NAME: [Signature] (Tom. Augustak)
 DATE: 5/12/11

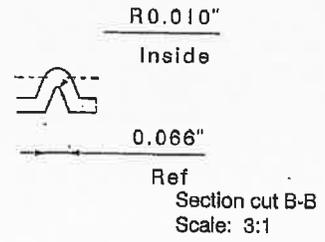
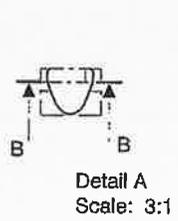
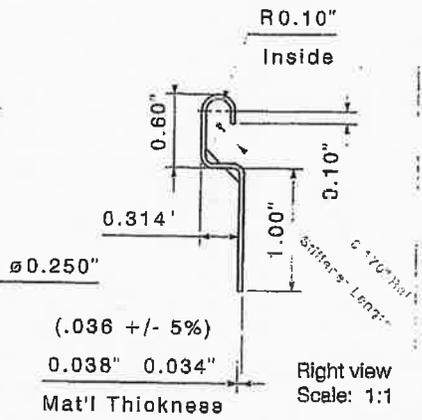
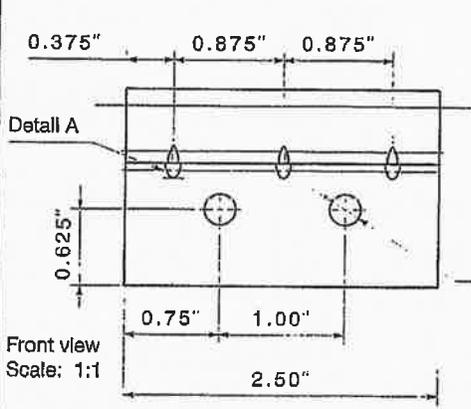


Isometric view
 Scale: 1:1

CONVERSION TABLE		METRIC UNITS (mm)	
1/16"	1.588	1/8"	3.175
1/8"	3.175	3/16"	4.763
1/4"	6.350	1/2"	12.700
3/8"	9.525	5/8"	15.875
1/2"	12.700	3/4"	19.050
5/8"	15.875	7/8"	22.225
3/4"	19.050	1"	25.400
7/8"	22.225		
1"	25.400		

TOLERANCE		ENGLISH UNITS (Inches)	
±0.005	±0.005	±0.005	±0.005
±0.010	±0.010	±0.010	±0.010
±0.015	±0.015	±0.015	±0.015
±0.020	±0.020	±0.020	±0.020

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Material:	G-90 Galv	<p>P.O. Box 6328 Wyncoding, PA 15810 T. 810.376.5751 F. 810.376.0832</p>	Description:	Petersen Horizontal Wall Panel Clip
Material Spec:	Commercial Quality		Drawing No.:	XP.1006
Surface Treatment:			Drawn By:	scda
Performance:			Date:	4/15/2011
Scale:	As Shown Above			