



Farabaugh Engineering and Testing Inc.

Project No. T303-11

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No. Pages: 8 (inclusive)

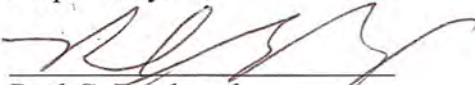
ASTM E-283-04 AIR LEAKAGE TEST
ASTM E-331-00 STATIC WATER PENETRATION TEST
AAMA 501.1-05 DYNAMIC WATER PENETRATION TEST

16" SIDING PANEL W/ NAIL GROOVE


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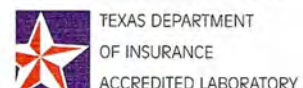
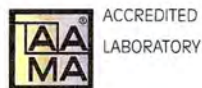
PETERSEN ALUMINUM CORP.
1005 TONNE RD.
ELK GROVE VILLAGE, IL 60007

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Paul G. Farabaugh

Approved by:


Patrick J. Farabaugh



AIR LEAKAGE AND WATER PENETRATION TESTING

Purpose

The purpose of this test is to establish air and water infiltration rates on the Petersen 16" Siding Panel w/ Nail Groove Wall Panels.

Test Date

10/5/11

Test Specimen

Manufacturer: Petersen Aluminum Corp.
1005 Tonne Rd.
Elk Grove Village, IL 60007

Panel: 16" Siding Panel w/ Nail Groove, 24 ga steel (nominal)

Substrate: 16 ga Studs @ 16" oc / 5/8" DensDeck / Tyvek Wrap w/ Taped Joints

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"
- AAMA 501.1-05 "Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure"

Test Assembly

An 8' X 8' mock-up assembly was constructed using steel framing supports comprised of 16 ga studs located at 16" oc. The 5/8" DensDeck was attached to the studs and then covered with the Tyvek barrier. The Tyvek Tape was used to seal all laps and joints of the Tyvek. The wall panels were attached using #10-16 X 1" long pancake head self drill fasteners located on the panel nail groove spaced at 16" oc through the DensDeck and into the 16 ga studs (1 panel fastener per support). There was no sealant used in the panel sidejoints. The test mock-up was positioned so that the panel sidejoints were in the horizontal direction.

Test Procedure

The tests were conducted in accordance with ASTM E-283-04 "Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", and ASTM E-331-00, "Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference" and AAMA 501.1-05 "Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure" and as provided herein.

ASTM E-283-04
AIR LEAKAGE TEST
Summary

Manufacturer: Petersen Aluminum Corp.

Test Specimen: 16" Siding Panel w/ Nail Groove, 24 ga steel

Ambient Temp. = 68 deg.F

Barometric Pressure = 30.24" Hg

POSITIVE PRESSURE
(INFILTRATION)

STATIC PRESSURE DIFFERENTIAL (PSF)	AIR LEAKAGE RATE (CFM/SF)
1.57	0.005
6.24	0.005

Results:

As a result of the test pressures, the test specimen exhibited air leakage rates as shown on the above table.

ASTM E-331-00
WATER PENETRATION TEST
Summary

Manufacturer: Petersen Aluminum Corp.

Test Specimen: 16" Siding Panel w/ Nail Groove, 24 ga steel

Ambient Temp. = 68 deg.F

POSITIVE PRESSURE
(INFILTRATION)

STATIC PRESSURE DIFFERENTIAL (PSF)	WATER SPRAY RATE (GAL/HR/SF)	TEST DURATION (MIN)	WATER INFILTRATION
6.24	5	15	None
12.48	5	15	None

Results:

As a result of the test pressures, the test specimen exhibited no water penetration as shown on the above table.

**AAMA 501.1-05
DYNAMIC WATER TEST
Summary**

Manufacturer: Petersen Aluminum Corp.

Test Specimen: 16" Siding Panel w/ Nail Groove, 24 ga steel

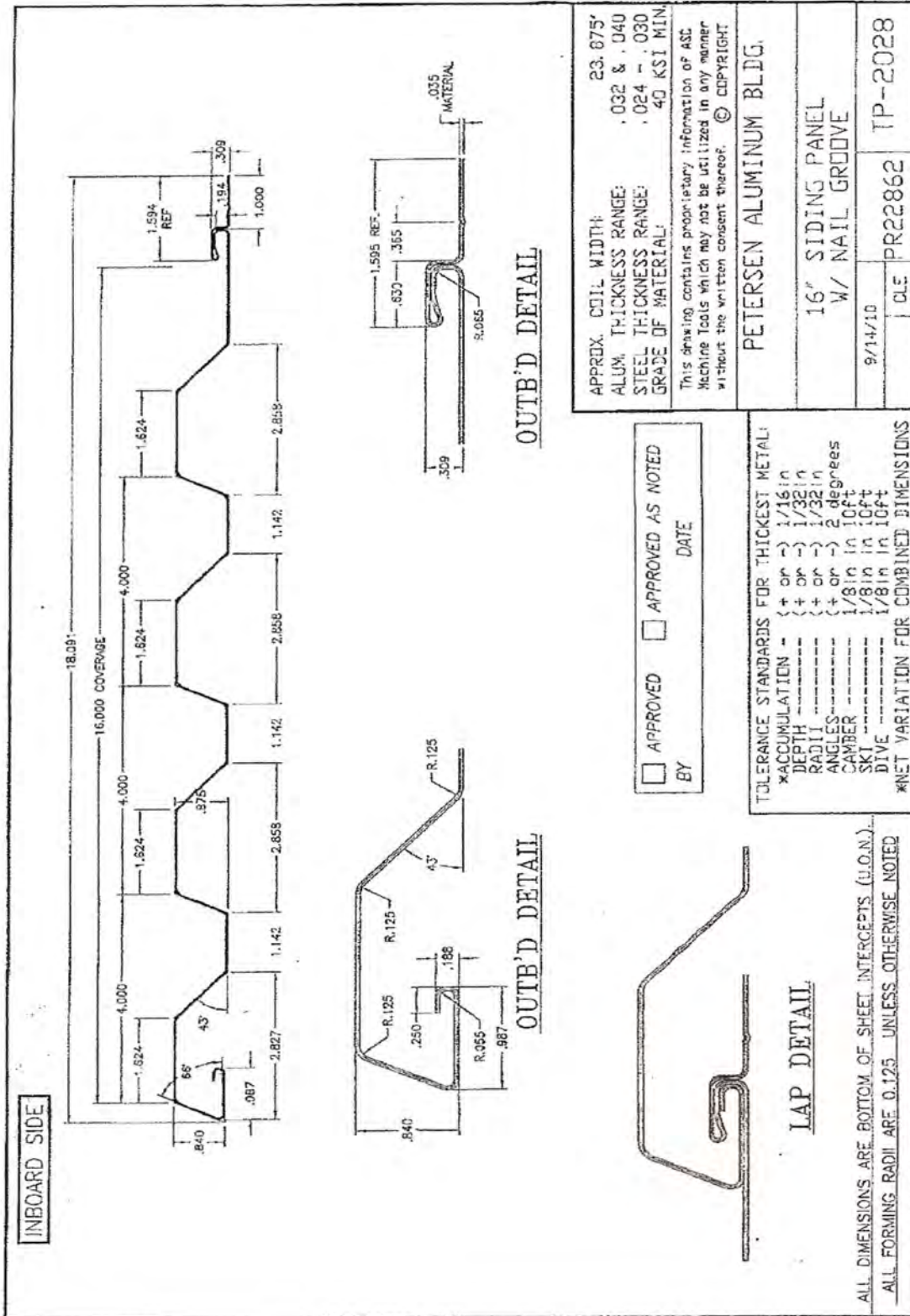
Ambient Temp. = 68 deg.F

POSITIVE PRESSURE
(INFILTRATION)

Static Pressure Differential (psf)	Water Penetration	Comments
15.0	None	No water leakage was detected

Results:

As a result of the test pressures, the test specimen exhibited no water penetration as shown on the above table.



INBOARD SIDE

OUTB'D DETAIL

OUTB'D DETAIL

LAP DETAIL

APPROX. COIL WIDTH: 23.675'
 ALUM. THICKNESS RANGE: .032 & .040
 STEEL THICKNESS RANGE: .024 - .030
 GRADE OF MATERIAL: 40 KSI MIN.

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PETERSEN ALUMINUM BLDG.	
16" SIDING PANEL W/ NAIL GROOVE	
9/14/10	PR22862
CLE	TP-2028

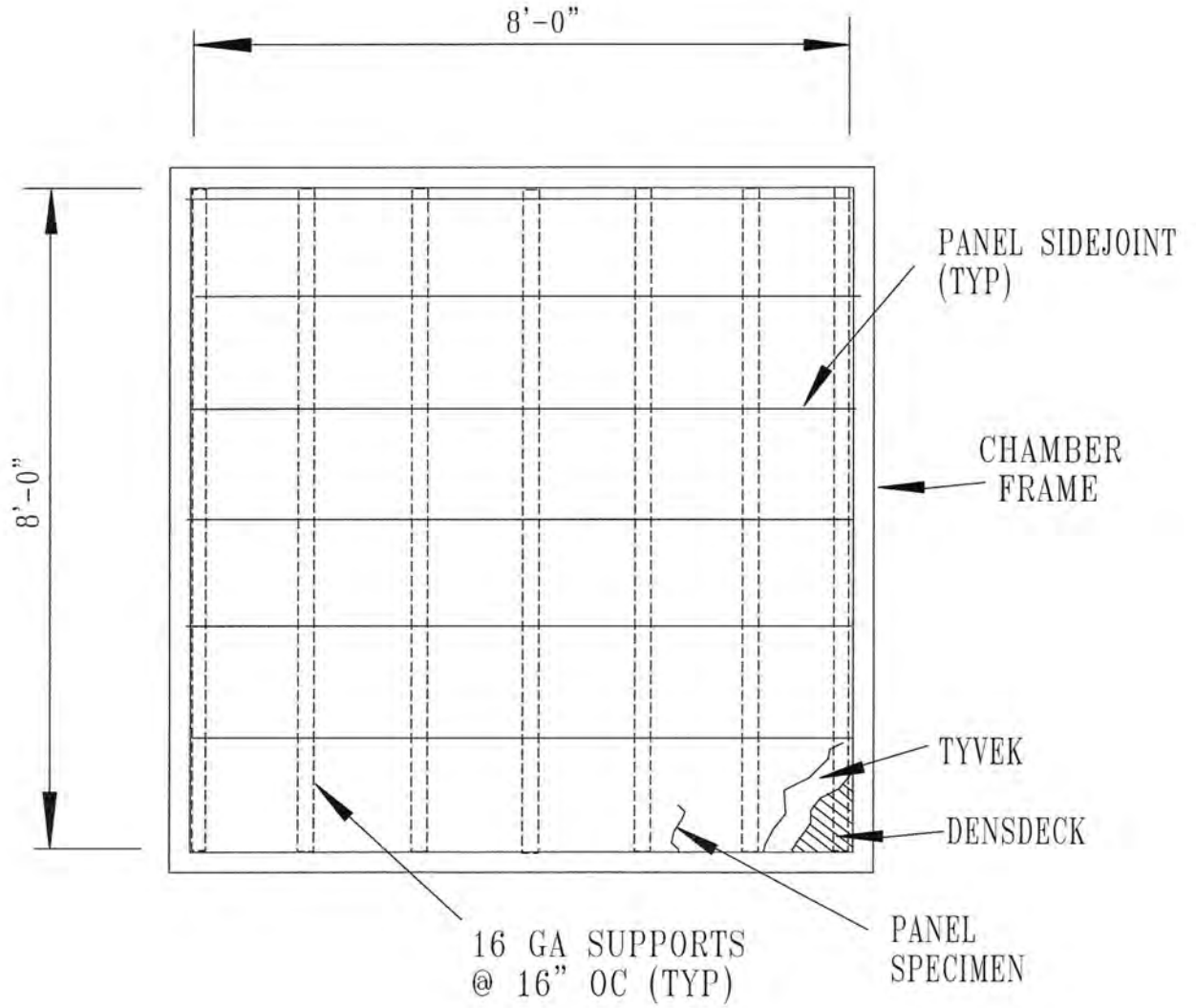
APPROVED BY _____ DATE _____
 APPROVED AS NOTED

TOLERANCE STANDARDS FOR THICKEST METAL:

ACCUMULATION	(+ or -)	1/16 in
DEPTH	(+ or -)	1/32 in
RADII	(+ or -)	1/32 in
ANGLES	(+ or -)	2 degrees
CAMBER		1/8 in in 10ft
SKI		1/8 in in 10ft
DIVE		1/8 in in 10ft

NET VARIATION FOR COMBINED DIMENSIONS

ALL DIMENSIONS ARE BOTTOM OF SHEET INTERCEPTS (U.O.N.)
 ALL FORMING RADII ARE 0.125 UNLESS OTHERWISE NOTED



MOCK-UP ASSEMBLY