



DATE: May 5, 1992

Report #18154

**SUBMITTED BY:** Petersen Aluminum Corporation  
955 Estes Avenue  
Elk Grove Village, IL 60007

**DATE OF TESTING:** April 22, 1992

**TESTING FACILITY:** The Dallas Laboratories, Inc.  
Dallas, Texas

**WITNESSED BY:**  
Yoosef Lavi, P.E. — Lavi & Associates  
Andy Wilson — The Dallas Laboratories, Inc.  
Larry Warren — The Dallas Laboratories, Inc.  
Don Davidson — Petersen Aluminum Corporation  
Josh Jacobi - Petersen Aluminum Corporation

**TESTS:**  
ASTM E 331-86- Standard test method for water penetration of exterior windows, curtain walls and doors by uniform static air pressure difference.

ASTM E 283-91- Standard test method for rate of air leakage through exterior windows, curtain walls, and doors.

**DESCRIPTION OF UNIT TESTED**

**Type:** Metal deck roof panel  
**Series:** Integral Standing Seam  
**Panel Profile:** 18 wide by 1-1//2 high  
**Overall size:** 8 -0 wide by 10 -0 long



Petersen Aluminum Corporation  
 May 5, 1992  
 Integral Standing Seam  
 Page 2

Test unit was installed over an 8'-0" wide by 10'-0" long chamber, at a slope of approximately 2:12 in the following sequence.

15/32" plywood decking supported at 24" o.c., was installed as substrate support. Type 30 organic felt as underlayment was installed over the plywood using 3/8" long steel staples. 18" wide by .024" thick panels were attached to the substrate using clips at 24" o.c.. The Clips were made of .050" extruded aluminum, and were fastened with 2 No. 10 x 1" long coated steel screws.

**SUMMARY OF TEST RESULTS**

<u>Title of Test</u>	<u>Test Method</u>	<u>Measured</u>
Air Infiltration @ 1.57 psf	ASTM E 2283-91	.02CFM/FT2
Air Infiltration @ 6.24 psf	ASTM E 283-91	.06CFM/Ft2
Air Exfiltration @ 1.57 psf	ASTM E 283-91	.03CFM/Ft2
Air Exfiltration @ 6.24 psf	ASTM E 283-91	.11CFM/Ft2
Water Penetration @ 12.00 psf	ASTM E 331-86	No Leakage

The above test results were obtained using the applicable ASTM test methods.

**TEST SUPERVISED BY:**

**TEST CONDUCTED BY:**

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 Yoosef Lavi, P.E.

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 Larry Warren