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DATE: May 5, 1992

Report #18158

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

DATE OF TESTING: April 27, 1992

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

WITNESSED BY:

Yoosef Lavi, P.E. - Lavi & Associates
Harbert J. Cole - The Dallas Laboratories, Inc.
Jim Hicks - The Dallas Laboratories, Inc.

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 E283-91- 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: Redi-Roof Standing Seam

Panel Profile: 12" wide by 1-1/2" high

Overall size: 8'-0" wide by 10'-0" long

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 .024" thick coated steel, and were fastened with 2 No. 10 x 1" long coated steel screws.
Details of panel installation, and panel profile are shown in figure No. 1.

SUMMARY OF TEST RESULTS

Title of test	Test Method	Measured
Air Infiltration @ 1.57 psf	ASTM E 283-91	.004CFM/Ft2
Air Infiltration @ 6.24 psf	ASTM E 283-91	.006CFM/Ft2
Air Exfiltration @ 1.57 psf	ASTM E 283-91	.015CFM/Ft2
Air Exfiltration @ 6.24 psf	ASTM E 283-91	.06CFM/Ft2
Water Penetration @ 12.00 psf	ASTM E 331-86	No Leakage

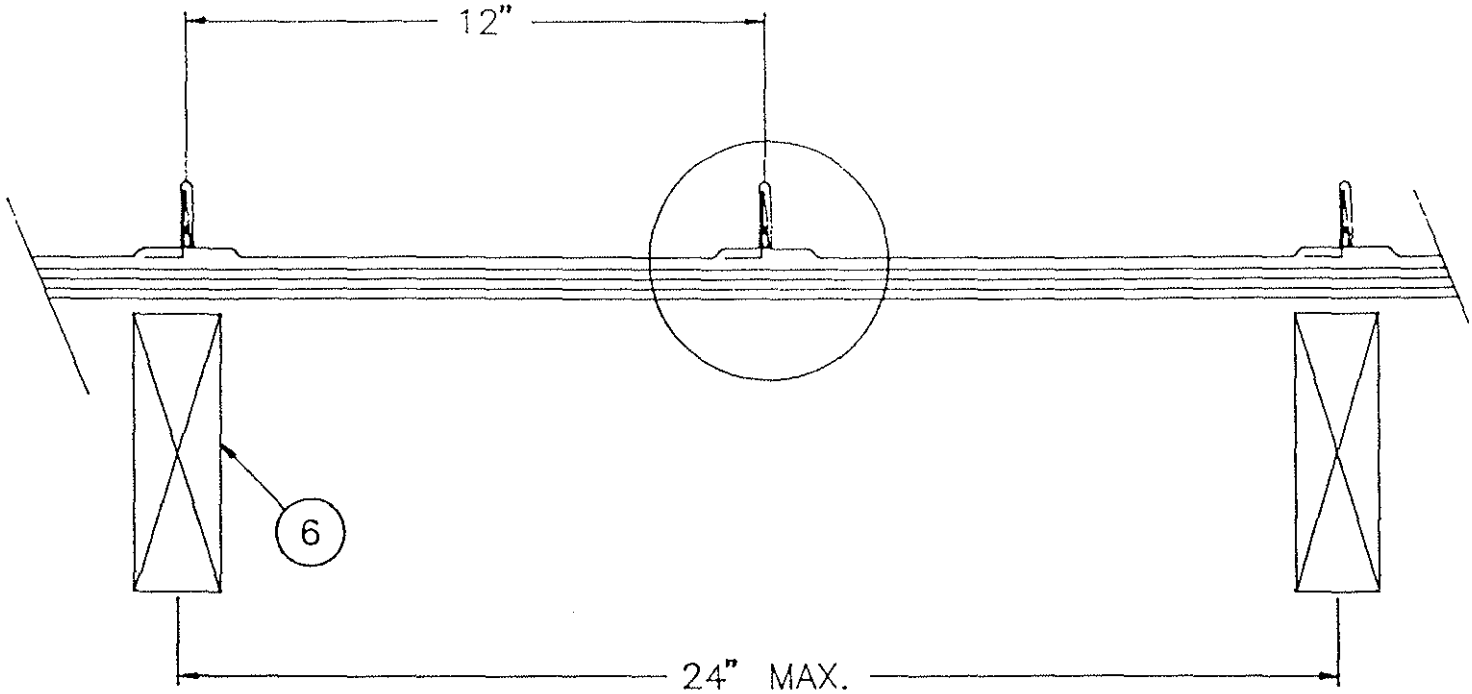
The above test results were obtained using the applicable ASTM test methods.

TEST SUPERVISED BY:

Yoosef Lavi, P.E.

TEST CONDUCTED BY:

Harbert J. Cole



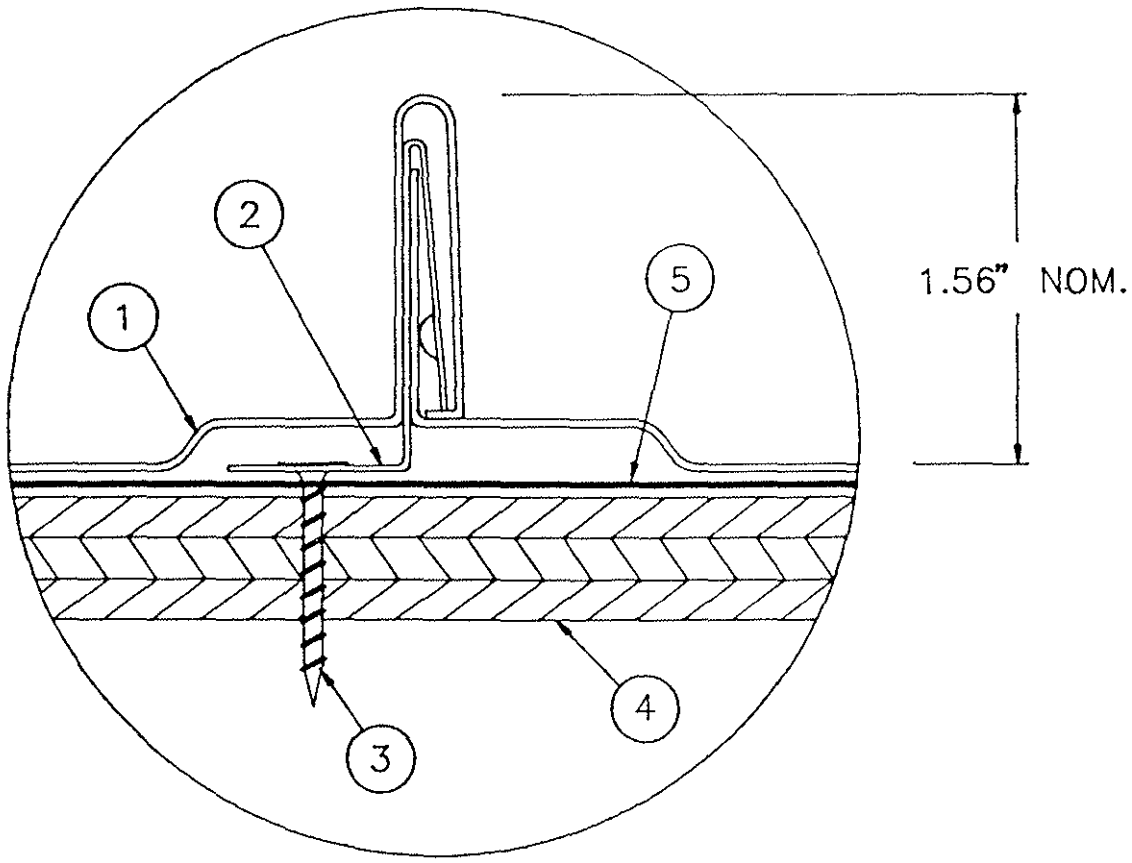


FIGURE NO. 1

FIGURE NO. 1 DESCRIPTIONS

1. **Metal roof deck Panels-** No. 24 msg coated steel panels, 12 in. wide, 1.5 in. high, with no endlaps.

2. **Roof Panel Clips-** One piece assembly, 2-1/4 in. wide, 1-3/8 in. high, .024 in. thick spaced 24 in. o.c.,

3. **Fasteners-** Fasteners used to attach panel clips to plywood deck, No. 10 by 1 in. long.

4. **Plywood decking-** Plywood decking, 15/32 in. thick.

5. **Underlayment-** Underlayment used over plywood deck was type 30 LB. roofing felt. Felt fastened to plywood deck with staples at random spacing.

6. **Supports-** spaced at 24 in. o.c..