



**Farabaugh Engineering and Testing Inc.**

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Project No. T180-06

Report Date: 7-17-06

No. of Pages: 5

PERFORMANCE TEST REPORT

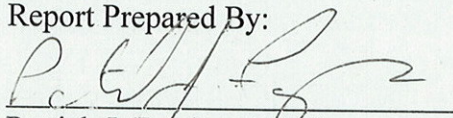
ASTM E330 UNIFORM LOAD TEST

FLUSH PANEL  
12" WIDE X 0.040 ALUMINUM

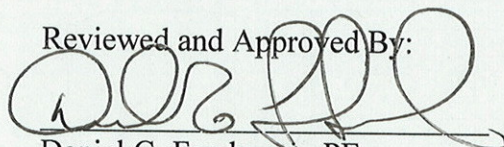
FOR

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

Report Prepared By:

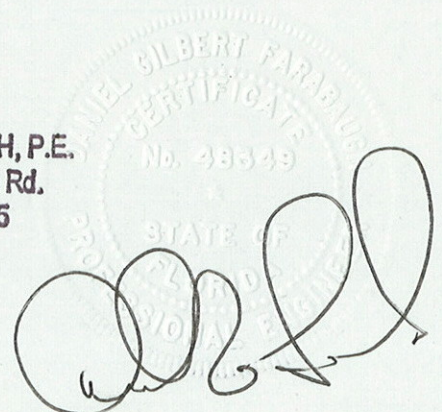
  
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**SUBJECT:**

Petersen Aluminum Corp. Flush Panel, 0.040" (nominal) aluminum, 12" wide

**INTRODUCTION:**

Uniform load tests were conducted on the subject panels on July 11, 2006 at the test facility of Farabaugh Engineering and Testing, Inc. A description of the tests and summary of results are contained herein.

**OBJECTIVE:**

The purpose of the tests was to determine the uniform load capacity at specified test pressures on the test specimen mock-up.

**TEST SPECIMENS:**

The specimen mock-up was comprised of Flush Panel, 0.040" aluminum (measured 0.038" thick), 12" wide. The sidejoints were reinforced with #14 x 7/8" lap fasteners located at 12" oc.

**TEST ASSEMBLY:**

The Flush Panel assembly was as shown on the attached drawings.

**TEST PROCEDURE:**

The structural test was per ASTM E330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference" and as provided in this report. A controlled blower provided a vacuum to uniformly load the specimen mock-up. A manometer was used to measure the pressure. Uniform load was applied in the positive and negative direction. A plastic barrier was placed between the panel specimen and the substrate.

**RESULTS:**

The results of the structural tests are shown on the attached tabulation of results.

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## Summary of Test Results

Test Date: 7-11-06

Specimen: Petersen Aluminum Flush Panel , 0.040 aluminum, 12" wide

Span Condition: 10 Spans @ 1' oc

Uniform Load: Negative ( Design Load = 48.5 psf, Proof Load = 72.8 psf)

### Deflections (in)

| Test Pressure (psf) | D1    | D2    | D3    | D4    | D5    | D6    |
|---------------------|-------|-------|-------|-------|-------|-------|
| 48.5                | 0.135 | 0.164 | 0.080 | 0.367 | 0.133 | 0.202 |
| 72.8                | 0.220 | 0.389 | 0.164 | 0.531 | 0.189 | 0.357 |
| 0 (Perm. Set)       | 0.079 | 0.092 | 0.063 | 0.118 | 0.075 | 0.081 |

Uniform Load: Positive ( Design Load = 48.5 psf, Proof Load = 72.8 psf)

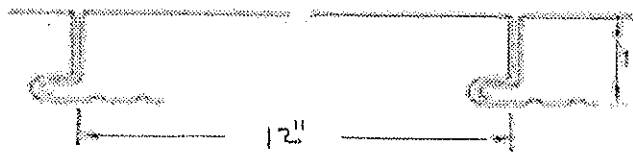
### Deflections (in)

| Test Pressure (psf) | D1    | D2    | D3    | D4    | D5    | D6    |
|---------------------|-------|-------|-------|-------|-------|-------|
| 48.5                | 0.194 | 0.807 | 0.177 | 0.813 | 0.208 | 0.773 |
| 72.8                | 0.200 | 0.835 | 0.180 | 0.830 | 0.223 | 0.844 |
| 0 (Perm. Set)       | 0.000 | 0.001 | 0.000 | 0.010 | 0.009 | 0.004 |

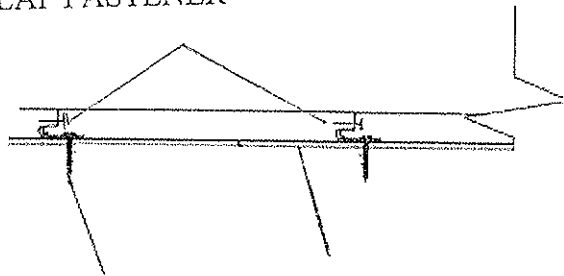
### Results:

Upon completion of the loading sequence of the panel specimen, there were no component failures.

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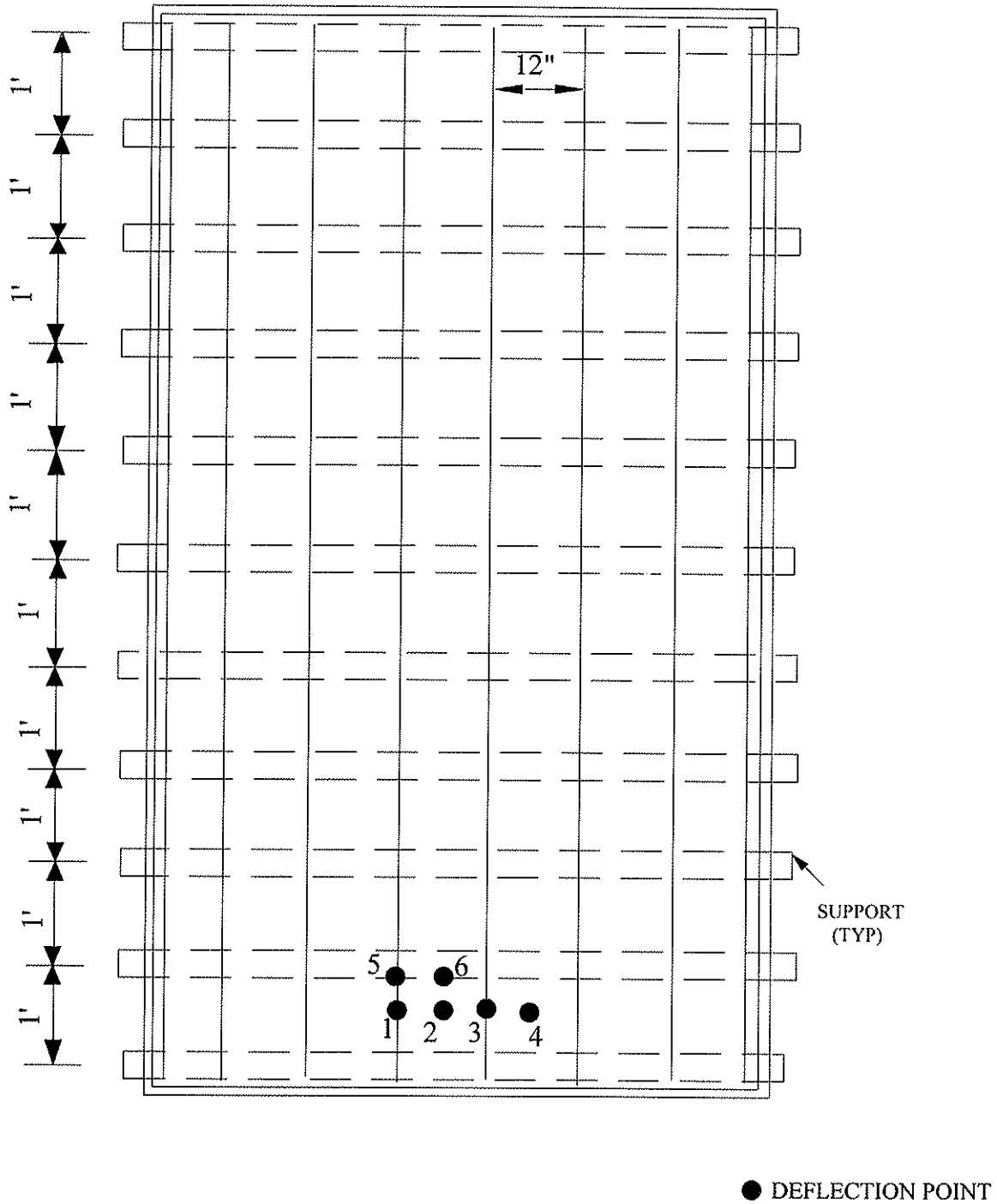


#14 x 7/8" LAP FASTENER  
(12" OC)



#10 PANCAKE HEAD FASTENER  
(AT EACH SUPPORT 12" OC)

16 GA SUPPORT MEMBER



## SPECIMEN MOCK-UP