Farabaugh Engineering and Testing, Inc.

Project No. T168-01

Report Date: June 6, 2001

PERFORMANCE TEST STUDY

TITE-LOC STANDING SEAM ROOF PANEL
22 GA / 16" WIDE
(6 SPANS @ 2'-6")

ASTM E-1592 STRUCTURAL PERFORMANCE TEST

FOR

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

Report Prepared By:

Patrick J. Farabaugh, PE

Reviewed and Approved By:

Daniel G. Farabaugh, PE

Keystone Commons • 515 Braddock Avenue • Turtle Creek, PA 15145
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Purpose:

The purpose of this performance test study is to evaluate the Petersen Aluminum Tite-Loc Standing Seam Roof Panel with respect to Metal Building Components, Inc.(MBCI) Battenlok Standing Seam Roof Panel as an extension of the referenced tests performed. Petersen Aluminum Corp. is licensed by MBCI to produce the MBCI Battenlok Panel (see attached letter in Appendix). Petersen Aluminum Corp. produces this panel under the name Tite-Loc.

Panel and Clip Data:

Panel - Tite-Loc Standing Seam Metal Roof Panel
Panel Width - 16"
Panel Thickness - 22 ga
Panel Clip – Tite-Loc Two Piece Sliding Clip
Panel Joint Sealant – 3/16" bead RoboFoam Factory Applied Hot Melt Mastic, by Q'SO Inc.

Manufacturer:

Petersen Aluminum Corp.
1005 Tonne Road
Elk Grove Village, IL 60007

Panel Analysis:

Tite-Loc Standing Seam Roof Panels were manufactured and submitted for analysis and comparison to the detail drawings as provided in this report. Profiles submitted for review were the 24ga Tite-Loc Panels, 16" wide. A cross section of the panels were measured and compared to the MBCI Battenlok Panel detail drawings.

Referenced Testing:

The referenced testing for this report (attached to the Appendix) is FET Project No. T116-95 on Battenlok 16" wide, 22 ga standing seam roof panel.

The summary of this referenced testing is as follows:

ASTM E1592 Structural Test

Description	Max. Test Load
16" w x 22 ga Battenlok (6 Spans @ 2'-6" oc)	97.8 psf

Conclusion :

Review of the Tite-Loc panel cross-section as compared to the Battenlok detail drawings indicated actual dimensions within the tolerances shown. Petersen Aluminum has submitted documentation indicating that all tooling is identical and by the same manufacturer as MBCI (see letters in Appendix). See appendix for referenced test reports on the MBCI Battenlok panel.

Project No. T116-95

TEST RESULTS FOR 22GA. BATTENLOK (6) SPANS @ 2'-6"

LOAD VS. DEFLECTION (BOTH ENDS OPEN)

TEST PRESSURE	DEFLECTION DIAL READINGS (INCHES)						DURATION	REMARKS
PSF	DIAL 1	DIAL 2	DIAL 3	DIAL 4	DIAL 5	DIAL 6	SEC.	
1.6	.000	.000	.000	.000	.000	.000	60.	PANEL WT.
6.8	.000	.250	.000	.188	.000	.188	60	
1.6	.000	.000	.000	.000	.000	.000	60	PANEL WT.
12.0	.000	.500	.000	.500	.000	.437	60	
1.6	.000	.000	.000	.000	.000	.000	60	PANEL WT.
17.2	.062	.687	.000	.687	.000	.562	60	
1.6	.000	.062	.000	.000	.000	.062	60	PANEL WT.
27.6	.125	1.125	.125	1.250	.062	1.125	60	
1.6	.000	.062	.000	.062	.000	.000	60	PANEL WT.
38.0	.125	1.685	.125	1.810	.125	1.500	60	
1.6	.000	.062	.000	.062	.000	.062	60	PANEL WT.
58.8	.250	2.370	.250	2.435	.188	2.188	60	
1.6	.000	.125	.000	.125	.000	.062	60	PANEL WT.
97.8							50	PANEL SEAM DISENGAGEMENT

Farabaugh Engineering and Testing, Inc.

Project No. T167-01

Report Date: June 6, 2001

PERFORMANCE TEST STUDY

TITE-LOC STANDING SEAM ROOF PANEL
22 GA / 16" WIDE
(3 SPANS @ 5 FT)

ASTM E-1592 STRUCTURAL PERFORMANCE TEST

FOR

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

Report Prepared By:

Patrick J. Farabaugh, PE

Reviewed and Approved By:

Daniel G. Farabaugh, PE

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Purpose:

The purpose of this performance test study is to evaluate the Petersen Aluminum Tite-Loc Standing Seam Roof Panel with respect to Metal Building Components, Inc.(MBCI) Battenlok Standing Seam Roof Panel as an extension of the referenced tests performed. Petersen Aluminum Corp. is licensed by MBCI to produce the MBCI Battenlok Panel (see attached letter in Appendix). Petersen Aluminum Corp. produces this panel under the name Tite-Loc.

Panel and Clip Data:

Panel - Tite-Loc Standing Seam Metal Roof Panel
Panel Width - 16"
Panel Thickness - 22 ga
Panel Clip – Tite-Loc Two Piece Sliding Clip
Panel Joint Sealant – 3/16" bead RoboFoam Factory Applied Hot Melt Mastic, by Q'SO Inc.

Manufacturer:

Petersen Aluminum Corp.
1005 Tonne Road
Elk Grove Village, IL 60007

Panel Analysis:

Tite-Loc Standing Seam Roof Panels were manufactured and submitted for analysis and comparison to the detail drawings as provided in this report. Profiles submitted for review were the 24ga Tite-Loc Panels, 16" wide. A cross section of the panels were measured and compared to the MBCI Battenlok Panel detail drawings.

Referenced Testing:

The referenced testing for this report (attached to the Appendix) is FET Project No. T114-95 on Battenlok 16" wide, 22 ga standing seam roof panel.

The summary of this referenced testing is as follows:

ASTM E1592 Structural Test

Description	Max. Test Load
16" w x 22 ga Battenlok (3 Spans @ 5' oc)	76.6 psf

Conclusion :

Review of the Tite-Loc panel cross-section as compared to the Battenlok detail drawings indicated actual dimensions within the tolerances shown. Petersen Aluminum has submitted documentation indicating that all tooling is identical and by the same manufacturer as MBCI (see letters in Appendix). See appendix for referenced test reports on the MBCI Battenlok panel.

Project No. T114-95

TEST RESULTS FOR 22GA. BATTENLOK (3) SPANS @ 5'-0"

LOAD VS. DEFLECTION

TEST PRESSURE PSF	DEFLECTION DIAL READINGS (INCHES) DIAL 1	DIAL 2	DIAL 3	DIAL 4	DIAL 5	DIAL 6	DURATION SEC.	REMARKS
1.2	.000	.000	.000	.000	.000	.000	60.	PANEL WT.
6.4	.062	.250	.000	.250	.000	.125	60	
1.2	.000	.000	.000	.000	.000	.000	60	PANEL WT.
11.6	.125	.500	.062	.500	.062	.375	60	
1.2	.000	.000	.000	.000	.000	.000	60	PANEL WT.
16.8	.188	.812	.125	.750	.062	.625	60	
1.2	.000	.000	.000	.000	.000	.000	60	PANEL WT.
22.0	.250	1.125	.188	1.062	.062	.812	60	
1.2	.062	.000	.000	.062	.000	.062	60	PANEL WT.
27.2	.250	1.313	.250	1.313	.062	1.000	60	
1.2	.062	.062	.000	.062	.000	.062	60	PANEL WT.
37.6	.375	1.750	.312	1.750	.125	1.500	60	
1.2	.062	.125	.000	.125	.188	.125	60	PANEL WT.
58.4	.562	2.625	.437	2.625	.312	2.188	60	
1.2	.125	.250	.000	.188	.188	.125	60	PANEL WT.
76.6							20	PANEL SEAM DISENGAGEMENT