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SOCIETY OF PETROLEUM ENGINEERS OF AIME

U.S. Aluminum Corp. - Texas

200 Singleton Drive Waxahachie, TX 75165

Attn: Jeff Lockenour

Date: September 19, 1996 (Reissued: May 21, 1998)

Report No. 24535-R

REPORT

SUBJECT:

Performance testing in accordance with ASTM E 283-91 (Air Infiltration), ASTM E 331-93 (Water Resistance), ASTM E 330-96 (Uniform Load Deflection) and ASTM E 330-96 (Uniform Load Structural).

DESCRIPTION OF UNIT TESTED

Type: Aluminum Storefront

Series: 6" Flush Front

Overall Size: 7'11" x 7'11-1/4" (2.41 m x 2.42 m)

Configuration: 00

Glass: Sealed insulating glass: 2 pcs 1/4" (6.35 mm) tempered, 1/2" (12.70 mm) air spacer, 1" (25.4 mm) overall thickness.

Glazing: Capture glazing with NP-225 gasket at interior and exterior face of glass

Weep Arrangement: Four (4) 1-1/4"x 1/8" (31.75 mm x 3.175 mm) weep slots at exterior face of (FF 701) sill flashing. Two per lite.

Sealant: End dams are sealed to subsill (FF 701) and to jambs (FF 652) at interior and exterior. Head (FF 673) and sill (FF 683) are sealed at ends to jambs (FF 652) and intermediate mullion (RF 710/FF 652). Sill (FF 683) sealed to subsill (FF 701) at exterior joint full span. Sealant applied to the horizontal joint between main frame and the exterior leg of snap on covers (M 773), and the vertical joint between (RF 710) and (FF 652).

Other Features: End dam secured by two (2) #6x1/2" (6 x 12.70 mm) screws. Each horizontal frame member is secured to vertical frame member by two (2) #10x1" (10 x 25.4 mm) screws.

Date Testing Started: September 17, 1996

Date Testing Completed: September 18, 1996

SUMMARY OF TEST RESULTS

| TITLE OF TEST | TEST METHOD | MEASURED | ALLOWED |
|--|---------------|---|---|
| Air Infiltration @ 6.24 psf (30.46 kg/m²) | ASTM E 283-91 | 0.05 CFM/Ft ² (0.024 liter/sec) | 0.06 CFM/Ft ² (0.028 liter/sec) |
| Water Resistance @ 10.00 psf (48.82 kg/m ²) | ASTM E 331-93 | No Leakage | No Leakage |
| Uniform Load Deflection | ASTM E 330-96 | | |
| Exterior 20.0 psf (97.64 kg/m²) Interior 20.0 psf (97.64 kg/m²) | | 0.110" (2.79 mm) | 0.545" (13.84 mm) |
| | | 0.107" (2.72 mm) | 0.545" (13.84 mm) |
| Uniform Load Structural | ASTM E 330-96 | | |
| - Exterior | | 30.0 psf * | 30.0 psf * |
| | | (146.44 kg/m ²) | (146.44 kg/m ²) |
| - Interior | | 30.0 psf * | 30.0 psf * |
| | | (146.44 kg/m ²) | (146.44 kg/m ²) |
| - Permanent Set | | Negligible | 0.382" (9.703 mm) |

^{*} No glass breakage, permanent deformation, or other damage causing the unit to be inoperable.

The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specifications.

DALLAS LABORATORIES, INC. TESTING LABORATORY

DIRECTOR, WINDOW & DOOR TESTING

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