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TESTED FOR

INTERNATIONAL WINDOW CORP.

5625 East Firestone Boulevard
South Gate, CA 90280

1.0 PURPOSE

The purpose of this report is to present the testing methods employed and the test results obtained during the performance testing of one (1) **Aluminum Horizontal Sliding Window** described in paragraph 4.0 of this report.

2.0 TEST REFERENCES

- 2.1 NAFS – North American Fenestration Standard/specification for windows, doors, and skylights
AAMA/WDMA/CSA 101/IS.2/A440-08
Class CW – PG30: Size Tested 3048 x 1832 mm (120 x 72 in) – Type HS
- 2.2 CAWM 301 - 90 Forced Entry Resistance Tests for Windows.
- 2.3 ASTM F 588-07 Standard Test Method for Measuring the Forced Entry Resistance of Windows

3.0 SUMMARY

The test results in paragraphs 5.0 and 6.0 indicate that the test sample described in paragraph 4.0 of this report complied with the performance requirements of the above referenced specifications.

4.0 SAMPLE SUBMITTED

SERIES: 6222 Horizontal Slider

CONFIGURATION: XOX

FRAME SIZE: 3048 mm x 1832 mm (120.00" x 72.13")

SASH SIZES: 765 mm x 1762 mm (30.12" x 69.37")

FIXED SIZE: 1480 mm x 1737 mm (58.27" x 68.39") Daylight Opening

GLASS: All panels were glazed with 0.76" overall insulated glass unit which contained 0.22" annealed glass on each side and a 5/16" metal spacer.

INSULATED

GLASS SPACER: The spacer was an A7-S type.

GLAZING: Each of the panels was channel glazed with vinyl gasket.

WEEPAGE:

The sill exterior face contained six (6) 3/4" x 1/8" butterfly weep slots; one butterfly weep 2.5" from each end and one 2.5" each way from each fixed interlock. These weeps were concealed with a PVC push in W-shaped weep cover.

The fixed glazing channel of the sill contained six (6) 3/8" x 3/32" weep slots; one 1.5" from each end and one 1.5" each way from each fixed interlock.

The sill operable channel contained six (6) 3/4" x 3/16" weep slot, three under each sliding panel.

WEATHERING:

The operable panels each contained a strip of 0.220" overall pile with center fin full perimeter facing out.

HARDWARE:

At the bottom end, the stiles each contained an adjustable nylon roller in a metal housing fastened with a pair of screws to the stile.

The rails each contained a nylon glide 1" in from each end that fit into a notch in the rails.

A metal sweep lock incorporated with a pull handle was secured 21.5" from each end of each interlock with a pair of #8 x 1/2" PPH screws. When closed and locked, the tongue of each lock engaged against an extruded lip in its fixed interlock.

CONSTRUCTION:

The frame corners were mechanically joined with a pair of screws.

The fixed and operable panel corners were each mechanically joined with one (1) #6 x 9/16" PPH screw.

The mullions were mechanically joined to the frame with a pair of #6 x 3/8" self tapping PPH screws at each end from the exterior. The mullion screws at the head fastened through the frame into an aluminum clip in the mullions.

CAULKING:

The following were sealed:

- 1) The frame corners were sealed full profile.
- 2) Each mullion to frame sill joint was sealed from the interior.

ANCHORING:

The frame was mounted over a 2" x 6" wood rough opening and fastened through the nail fin with #6 x 1 5/8" PFH screws every 16" on center. Wood furring was applied over the nail fins and screwed to the wooden buck.

5.0 TEST PROCEDURES AND RESULTS

5.1 All testing procedures were performed in accordance with the performance requirements of the test specifications referenced in paragraph 2.0 of this report.

5.2 TEST RESULTS
PARAGRAPH

	TEST DESCRIPTION	MEASURED	ALLOWED
5.3.1.1	Operating Force (ASTM E 2068) Breakaway Motion	37 N (8.3 lbf) 28 N (6.3 lbf)	N/A 115 N (25 lbf)
5.3.1.1.3	Latching Device Open and Close Latch Device	9.0 N (2.0 lbf)	100 N (22.5 lbf)
5.3.2.1	Air Infiltration (ASTM E 283) 75 Pa (1.6 PSF) The tested specimen exceeds the performance levels specified in AAMA/WDMA/CSA 101/1.S.2/A440 for air leakage resistance.	0.8 L/s•m ² (0.16 CFM/Ft ²)	1.5 L/s•m ² (0.3 CFM/Ft ²)
5.3.3.2	Water Penetration (ASTM E 547) 220 Pa (4.50 PSF) With/without screens	No Leakage	No Leakage
5.3.4.2	Uniform Load Deflection (ASTM E 330) 1440 Pa (30.0 PSF) POS 1440 Pa (30.0 PSF) NEG	6.50 mm (0.26") 6.25 mm (0.25")	10.00 mm (0.39") 10.00 mm (0.39")
5.3.4.3	Uniform Load Structural (ASTM E 330) 2160 Pa (45.0 PSF) POS 2160 Pa (45.0 PSF) NEG	0.00 mm (0.00") 0.00 mm (0.00")	5.25 mm (0.21" Set) 5.25 mm (0.21" Set)
5.3.6.3	Deglazing (ASTM E 987) 320 N Stiles (70 lbf.) 230 N Rails (50 lbf.)	5% 5%	Less than 100% Less than 100%

6.0 5.3.5 ASTM F 588 Forced Entry Resistance Test Results For Windows

1.2.1 Type "A" Operable Window Assemblies
Table A1.1 Grade 10

	TEST	RESULTS	ALLOWED
A2.4.1		Passed	No Entry
A2.4.2	A1	Passed	No Entry
A2.4.3	A2	Passed	No Entry
A2.4.4	A3	Passed	No Entry
A2.4.5	A4	Passed	No Entry
A2.4.6	A5	Passed	No Entry
A2.4.8	A7	Passed	No Entry
A2.2.1		Passed	No Entry
A2.3.1		Passed	No Entry
Fixed Panel			
A2.7.1	A2.1	Passed	No Entry
A2.7.3	A2.1	Passed	No Entry

6.0 TEST RESULTS

5.3.5 CAWM 301 - 90 FORCED ENTRY RESISTANCE TEST RESULTS

2.4.1 Type "I" Window

	<u>TEST</u>	<u>RESULTS</u>	<u>ALLOWED</u>
5.1.1	Disassembly	Passed	No Entry
5.1.2	A	Passed	No Entry
5.1.3	B	Passed	No Entry
5.1.4	C	Passed	No Entry
5.1.5	E	Passed	No Entry
5.1.6.1	D	Passed	No Entry
5.1.7	E	Passed	No Entry

Fixed Panel

5.4.1	A	Passed	No Entry
5.4.2	B	Passed	No Entry


For a complete description of the tested sample refer to the attached twelve (12) pages of drawings and bill of materials .

Assembly and die drawings of frame members are on file and have been compared to the sample submitted. Test sample sections, drawings, and a copy of this report will be retained at the test laboratory for four years.


This test report may not be modified in any way without the written consent of Fenestration Testing Laboratory.

The preceding test results were obtained by using the applicable ASTM Test Methods. This report does not constitute Certification of this product. An approved Administrator/Validator can only grant certification.

Testing Completed: January 15, 2010
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