



Architectural Testing

ANSI/AAMA/WDMA STRUCTURAL TEST REPORT

Rendered to:

HURD MILLWORK COMPANY, INC.
520 South Whelen Avenue
Medford, Wisconsin 54451

ATI Report No: 06-30248.01
Test Date: 08/06/01
and: 09/04/01
Report Date: 09/04/01
Expiration Date: 08/06/05

Series/Model: DH1-AL-WD
Type: Aluminum Clad Double Hung Window

Test Procedure:

The test specimen was evaluated in accordance with ANSI/AAMA/WDMA 101/I.S. 2-97, "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors," for conformance to the **Class H-LC30 46 x 81** performance requirements, as well as water test 4.50 psf and optional structural test of 45.00 psf positive and negative.

Test Specimen Description:

Overall Size: 45 -1/2" wide by 80 -5/8" high

Upper Sash Size: 42 -3/8" wide by 38 -5/8" high

Lower Sash Size: 42 -3/8" wide by 40" high

Overall Area: 25.48 ft²

Finish: Exterior was aluminum cladding, and the interior was natural wood.

Glazing: The sash were glazed using nominal 3/4" thick sealed insulating glass composed of two sheets of double strength clear annealed glass separated by a 1/2" desiccant metal spacer. The glass was set from the interior against a continuous silicone backbed, and wood glazing beads were employed at the interior which was secured with 3/4" brads spaced 8" to 10" on center.

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Test Specimen Description:(con't)

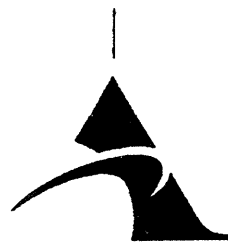
Hardware:(con't)

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Tilt latch	4	Upper sash, top rail and lower sash, top rail at ends
Tilt pin	4	Sash stiles at bottom ends

Installation: The test specimen was installed into a nominal 2" x 6" wood buck. The interior side of the applied nailing flange was sealed to the wood buck and secured with 2" long roofing nails, spaced approximately 4" on center.

Test Results:

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.6.1	Operating Force Upper Sash Lower Sash	29 lbs. 25 lbs.	35 lbs. 35 lbs.
2.1.2	Air Infiltration ASTM E 283-91 @ 1.57 psf	0.23 cfm/ft ²	0.3 cfm/ft ²
<i>The test specimen meets the performance levels specified in ANSI/AAMA/WDMA 101/I.S.2-97 for a H-LC30 window, for air infiltration.</i>			
2.1.3	Water Resistance ASTM E 547-96 with and without screen @ 3.75 psf	No entry	No entry @ 3.75 psf
2.1.4.2	Uniform Load Structural ASTM E 330-97 Meeting rail @ 37.50 psf (positive) @ 37.50 psf (negative)	0.025" 0.013"	0.4% of L = 0.170" 0.4% of L = 0.170"



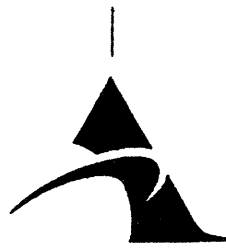
Test Results:(con't)

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.6.2	Deglazing Test ASTM E 987-88		
	Top rail @ 70 lbs.(U)	Negligible (<0.01")	0.50"/100%
	Bottom rail @ 70 lbs.(U)	Negligible (<0.01")	0.50"/100%
	Left stile @ 50 lbs.(U)	Negligible (<0.01")	0.50"/100%
	Right stile @ 50 lbs.(U)	Negligible (<0.01")	0.50"/100%
	Top rail @ 70 lbs.(L)	Negligible (<0.01")	0.50"/100%
	Bottom rail @ 70 lbs.(L)	Negligible (<0.01")	0.50"/100%
	Left stile @ 50 lbs.(L)	Negligible (<0.01")	0.50"/100%
	Right stile @ 50 lbs.(L)	Negligible (<0.01")	0.50"/100%
2.1.8	Forced Entry Resistance ASTM F 588-97 Grade 10	No entry	No entry @ Grade 10

Optional Performance:

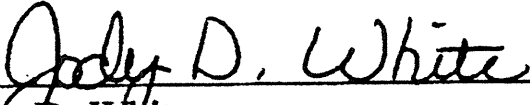
<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
4.3	Water Resistance ASTM E 547-96 without screen @ 4.50 psf	No entry	No entry @ 4.50 psf
4.4.2	Uniform Load Structural ASTM E 330-97 Meeting rail		
	@ 45.00 psf (positive)	<0.001"	0.4% of L = 0.170"
	@ 45.00 psf (negative)	<0.001"	0.4% of L = 0.170"

Design Pressure Rating: For use in locations adhering to the S.B.C.C.I., S.F.B.C., S.F.B.C. Broward Edition, and where the pressure requirements as determined by ASCE 7 minimum design loads for buildings and other structures does not exceed design pressure ratings listed above.



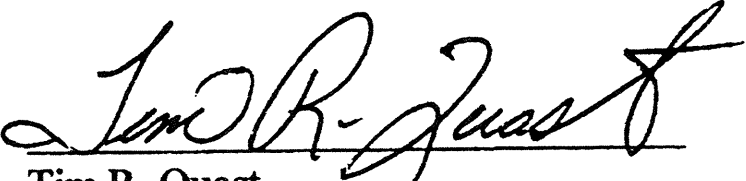
Detailed drawings and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program Administrator.

ARCHITECTURAL TESTING, INC.



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Project Manager

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Tim R. Quast
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06-30248
