



Quality Accuracy Assurance

Fenestration Testing Laboratory, Inc.

8148 N.W. 74th Avenue Medley, FL 33166 Phone: (305) 885-3328 Fax: (305) 885-3329 (888) 819-7877

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Report Date: 9/25/2015
 Completion Date: 9/3/2015
 Expiration Date: 9/3/2019
 Page No. Page 1 of 18
 Lab. Number: 8483
 Project Number: 15-5706

OFFICIAL TEST REPORT

MANUFACTURER: Aluminco S.A.

SPECIFICATIONS: Florida Building Code
 Concentrated Load Test
 ANSI Z97.1

ADDRESS: Inofita, Viotia Greece, 32011

PROJECT: Aluminco S.A.

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DESCRIPTION OF SAMPLE	
Model Designation:	Series: F50 Horizon Quattro Glass Railing
Overall Size:	10'-6" (126") by 3'-6 1/2" (42 1/2") high
Size and Location of Post:	Four 40 1/4" high vertical post located 4", 43 3/8", 82 5/8" and 122" from left
Sample B-1	

MATERIAL CHARACTERISTICS			
Members	Material**	Part Number**	Joint Type
Hand Rail	6060-T6	F50-201	N/A
Vertical Post	6060-T6	F50-109	N/A
Two Piece Saddle	6060-T6	4328	N/A
Two Piece Glass Clamps	6060-T6	4193	N/A
Cover	6060-T6	F50-122	N/a

Glazing			
Glazing Location	Glazing Material	Glazing Compound	Compound Color
All three lites of glass	*13/32" nominal laminated glass composed of (2) 5/32" heat strengthened glass	None	N/A
Interlaying Film: *0.090" **DuPont SentryGlas		Laminator: **Tecnoglass	
Glazing Method: Interior glazed with a *1" glazing penetration using two two-piece aluminum glass clamps (part No. 4193) with a rubber gasket between glass and clamps. The glass clamps were at each side of each lite of glass located 5" and 36" from bottom of the vertical post (total of twelve glass clamps). The glass clamps were fastened to the vertical post using two No. 10 by 1 1/2" FH SDS. The glass clamps were fastened together using two 1/4-28 by 5/8" FH MS.			
Daylight Opening:	36 1/4" by 33 1/2" high		

Additional Information
<p>The sample was tested using one 126" long extruded aluminum hand rail (part No. F50-201). The hand rail was fastened to the vertical post using one two piece saddle (part No. 4328) per post. The saddle slides into the vertical post and is secured with epoxy, the saddle is fastened together using one 1/4-28 by 5/8" FH MS and the saddle is fastened to the hand rail using two 1/4-28 by 5/8" FH MS with nut.</p> <p>The sample was tested using a snap on extruded aluminum cover (part No. F50-122) at each vertical post.</p>



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Sample Installation	
The sample was installed onto a 3,000 psi concrete test slab using one 4" by 4" by 1/4" thick aluminum installation plate at bottom of each post. The installation plate was fastened to concrete slab using four 1/2" by 4" HWH wedge bolts. And the installation plate was fastened to each vertical post using four 5/16-28 by 1 1/2" OH MS.	

Sample: B-1	Temperature: 85°F	Barometric Reading: 30.12 inches Hg		
Title of Test		Load	Notes	
Concentrated Load Test		525.0 lbs	As per FBC section 1607.8.1. A horizontal load was applied at the center of the hand rail.	
Reading#	Deflection	Permanent Set	Results	Add. Info
1	2.875"	0.215"	Passed	

Sample: B-1	Temperature: 85°F	Barometric Reading: 30.12 inches Hg		
Title of Test		Load	Notes	
Concentrated Load Test		200.0 lbs	As per FBC section 1607.8.1.1. A horizontal load was applied at the corner of the hand rail.	
Reading#	Deflection	Permanent Set	Results	Add. Info
2	2.375"	0.146"	Passed	



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Sample: B-1		Temperature: 79°F		Barometric Reading: 30.12 inches Hg	
Title of Test			Load		Notes
Concentrated Load Test			50.0 lbs		As per FBC section 1607.8.1.2. A load was applied at the center of the left lite perpendicular to the glass.
Reading#	Deflection	Permanent Set	Results	Add. Info	
3	n/a	n/a	Passed		

Sample: B-1		Temperature: 89.3°F		Barometric Reading: 30.05 inches Hg	
Title of Test			Notes		
Drop Test			As per FBC section 1618.4.6.3		
Drop #	Results	Add. Info			
1	Passed	Impacted center of lite. After impact the glass did break but remained in the place and there wasn't any apparent tear in the inter layer film.			
2	Passed	Impacted center of lite. After impact the glass did not break.			
3	Passed	Impacted center of lite. After impact the glass did break but remained in the place and there wasn't any apparent tear in the inter layer film.			



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Remarks

Detailed drawings and test report will be retained by Fenestration Testing Laboratory for a period of four years from the original test date. Due to the code cycle change of four years, it is recommended that this report be evaluated during the lifespan of this document.

This product was tested and meets the requirement set forth by the Florida Building Code (2014) concentrated load test sections 1607.8.1, 1607.8.1.1 and 1607.8.1.2.

This product was tested in accordance with ANSI Z-97.1-09 (FBC section 1618.4.6.3) with no deviations.

Testing was conducted as per instructions received from the manufacturers company representative.

Witnessed by:
Ms. Idalmis Ortega, P.E.

Technicians:
Mr. Harold Anacona

FENESTRATION TESTING LABORATORY, INC.

Mr. Manny Sanchez
Chief Executive Officer