

Fenestration Testing Laboratory, Inc.

Report Date: Completion Date: Expiration Date: 6/23/2015 6/2/2015 6/2/2019

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Lab. Number: Project Number: 8473 15-5705

OFFICIAL TEST REPORT

CLIENT:

Aluminco S.A.

SPECIFICATIONS:

Florida Building Code

Concentrated Load Test, ANSI Z-97.1,

ASTM E1996

ADDRESS:

Inofita, Viotia Greece, 32011

PROJECT:

Aluminco S.A.

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DESCRIPTION OF SAMPLE			
Model Designation:	Series: Crystalline Type E Glass Railing		
Overall Size:	9'-10 1/2" (118 1/2") by 3'-6" (42") high		
Sample B-1		//**/	

Glazing						
Glazing Location	Glazing Mate	erial	Glazing Compound	Compound Color		
All three lites of	*11/16" nom	inal laminated glass composed	None	N/A		
glass	of (2) 5/16" h	(2) 5/16" heat strengthened glass				
Interlaying Film: *0.090" **DuPont SentryGlas			Laminator: **Tecnoglass			
Glazing Method: Pocket glazed with a *4.511" glazing penetration using a full length nylon U shaped setting						
block on the bottom and a vinyl gasket on the interior and exterior.						
Overall size of each lite of glass: 39 3/8" by 41 1/16" high						

Additional Information

The sample was tested using a single row of 11 13/16" long extruded aluminum two piece shoe bases located one at each end, one at mid span of each lite of glass and one at the glass joints.

The two piece shoe bases were fastened together using three 5/16-20 by 2 1/2" socket head screw with nut spaced 5" on centers.

The sample was tested using one 118 1/2" long aluminum hand rail secured to glass with clear silicone.

The sample was tested using one 1/4" by 3 1/2" by 1/4" by full length by 1/16" thick metallic channel below the shoes bases.

Sample Installation

The shoe bases were installed onto a concrete test slab using three 1/2" by 4 1/2" expansion bolts with washer and nut per shoe base located 1 5/8", 5 3/8" and 10 1/4" from left of each shoe base.



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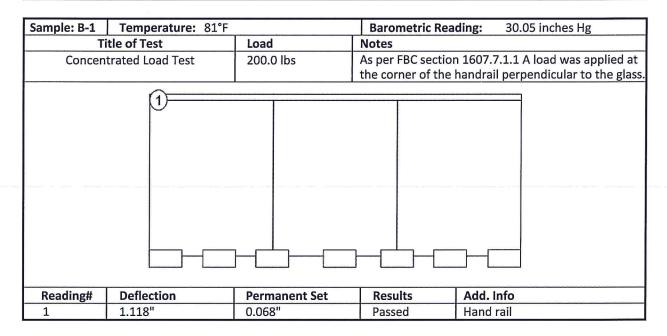
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Sample: B-1	Temperature: 8	1°F	Barometric Rea	ading: 30.05 inches Hg		
Title of Test Load Notes						
Concentra	ated Load Test	495.0 lbs		1607.7.1 A load was applied at the		
			center of the hand	Irail perpendicular to the glass.		
Reading#	Deflection	Permanent Set	Results	Add. Info		
1	1.750"	0.187"	Passed	Hand rail		
2	0.035"	0.004"	Passed	Shoe base		



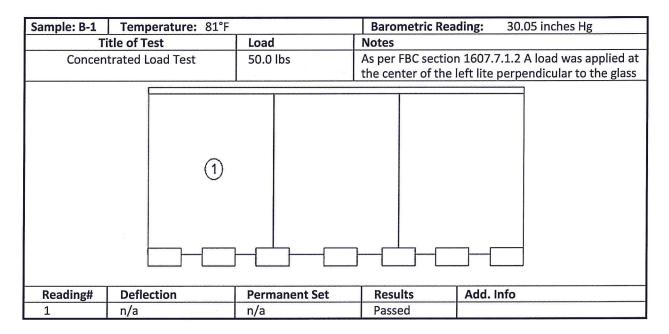


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Sample: B	-1 Te	emperature: 84°F		Barometric Reading:	30.05 inches Hg
	Title of Te	est N	otes		
	Drop Tes	st A	s per FBC section 24	07.1.4.1	
	F				
		1	2	(3)	
	*				
					_
Drop #	Results	Add. Info			
1	Passed	Impacted cent	er of lite. After impa	act the glass did break, b	ut remained in the place
		and there was	and there wasn't any apparent tear in the inter layer film.		
2	Passed	Impacted cent	Impacted center of lite. After impact the glass did break, but remained in the place		
		and there was	and there wasn't any apparent tear in the inter layer film.		
3	Passed	Impacted cent	Impacted center of lite. After impact the glass did break, but remained in the place		
		and there was	n't any apparent tea	r in the inter layer film.	



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Sample: B-1 T	emperature: 83°F		Baror	metric Reading:	29.98 inches Hg	
Title of Test		Notes				
Large Missile Imp	act Test	As per FBC section	As per FBC section 2407.1.4.2			
Missile Weight		Missile				
9.25 pounds		2" by 4" by 96" lor	g			
			(4)			
	1	3		(5)		
ų		2		6		
Impact	Speed	Results	Add. In	ifo		
1	50.0 ft/sec	Passed				
2	49.8 ft/sec	Passed				
3	49.9 ft/sec	Passed				
4	50.1 ft/sec	Passed				
5	49.9 ft/sec	Passed				
6	50.0 ft/sec	Passed				



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Revision	Description	Author	Effective Date
0	Initial Release	Ms. Iliana Sanchez	6/23/2015
1	Renamed the report as per manufactures instructions	Ms. Lusinda Delgado	12/15/2015

Notes

Drawings referenced in this document are an integral part of this report, therefore, are required when distributing this test report. Test results obtained represent the actual value of the tested specimens and do not constitute opinion, endorsement or certification by this laboratory.

This test report is considered the exclusive property of the client named herein and is applicable to the sample tested. This report may not be reproduced without the approval of Fenestration Testing Laboratory, Inc.

At conclusion of above tests, there was no apparent damage to the concrete slab or fasteners and after the impact the glass did break, but remained in place and there wasn't any apparent tear in the inter layer film.

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 (2010) concentrated load test sections 1607.7.1, 1607.7.1.1 and 1607.7.1.2.

This product was tested in accordance with ANSI Z-97.1-09 (FBC section 2407.4.1).

This product was tested in accordance with the ASTM E1996-09 (FBC section 2407.1.4.2).

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

Witnessed by:

Technicians:

Ms. Idalmis Ortega, P.E.

Mr. Manny Sanchez

FENESTRATION TESTING LABORATORY, INC.

Mr. Harold Ancona

Chief Executive Officer

^{*} designates measurements by laboratory

^{**} as per manufacturer