



American Test Lab of South Florida
6795 NW 17 Avenue Ft Lauderdale FL 33309
Phone (954) 973-0808 Fax (954) 973-0823
Web - www.atlsf.com E-Mail - info@atlsf.com

ATL Report # 0126.01-00

DC Note # ATL 00001

Page 1 of 6
Date: 6/15/00

ATL Certification # 98-0213.05

Test Dates: 3/7, 3/14, 3/15, 3/16,
3/17, 3/22, 3/29/00

Test Requested By - Roll - A - Way, 10601 Oak Street N.E., St. Petersburg, FL 33716.
Phone: (727) 576-1143 Fax: (727) 563-9701

Tests Conducted: DCBCCD PA 201-94, PA 202-94, PA 203-94, (with no deviations)
Qualifying: ASTM E 283, E 330, E 331.

Design Pressures - + 100.0 psf, - 100.0 psf

(1) DESCRIPTION OF UNIT:

Model Designation - Model # US60ER, 8' x 8' Roll-up garage door, as per Roll - A - Way drawing # S-1299-EG, pages 1 thru 2, dated 2/24/00 and components drawings.

Overall Size - 104-7/8" wide x 108" high

Specimens A2, B, C, D: At the jambs an extruded aluminum tubular end retention track (1.071" x 3.000") (6063 T6 extruded aluminum alloy). On specimen B right track attached to solid concrete with (31) 1/4" x 1-7/8" Red HD sleeve anchors, located (1) at 2-1/2" from bottom, 2-1/2", (2) at 2" oc, then (27) at 3" oc. On specimens A2, C, D right track attached to solid concrete with (31) 1/4" x 2-1/4" hex washer head ITW / Buildex Tapcons, located (1) at 2-1/2" from bottom, 2-1/2", (2)" at 2" oc, then (27) at 3" oc. On the left jamb the retention track was attached to an extruded aluminum tubular shape post (3" x 6") using (31) # 10 x 3/4" ss hex washer head tek screws, located (1) at 3" from bottom, (2) at 2" oc then (28) at 3" oc. Left jamb consisted of the retention track and an extruded aluminum tubular shape post (3" x 6"). The post was attached to a post base channel (3-17/32" x 2" x 1/4" typical wall thickness x 6" in length) (6063 T6 extruded aluminum alloy) at top and bottom using (2) 1/2" x 4 ss thru bolt and ss lock nut, each. The post base channel was attached to a concrete slab (16" x 16" x 6" deep) at top and bottom with (1) 3/4" x 5-1/2" wedge concrete anchors using nut and washer, each. At the head a 12" x 102-1/8" x 0.036" wall thickness aluminum roll forming shutter box cover, consisting of an interior hood, an exterior hood and a cast aluminum cover plate at each end. The interior hood consisted of a male section at top and female section at interior front, attached together with (3) # 10 x 3/4" ss hex washer head tek screws, located (1) on center and (1) at 26-3/8" from each end. On the left side the aluminum cover was attached to the interior hood with (5) # 10 x 3/4" ss hex washer head tek screws and was attached to the post using a "Z" shaped section. The "Z" shaped section was attached to the post, thru the exterior hood, using (1) 1/4" x 2" pan head phillips sms.

An extruded aluminum angle (1" x 1-1/2" x 0.100" wall thickness x 6" in length), used as reinforcement was attached to the cover plate using (3) # 66 ss pop rivets and to the post with (2) 1/4" x 2" pan head phillips sms. On the right side the aluminum cover was attached to the interior hood with (5) # 10 x 3/4" ss hex washer head tek screws and was attached to solid concrete using an aluminum angle (1" x 1-1/2" x 0.100" wall thickness x 6" in length). The angle was attached to the cover plate using (3) # 66 ss pop rivets and thru the exterior plate to solid concrete with (3) 1/4" x 2-1/4" hex washer head ITW / Buildex Tapcons.

Panel Construction:

Single span roll-up garage door panel with US60 ER hollow extruded aluminum slats. (6063 T6 aluminum alloy). 46 slats, (2.525 x 0.050" wall thickness x 97-1/8" in length) with a vertical span between extruded aluminum tracks. An end # 12 x 2-1/2" ss Robertson drive head sms retention screw at each end of the slats on all specimens.

Weather-stripping -

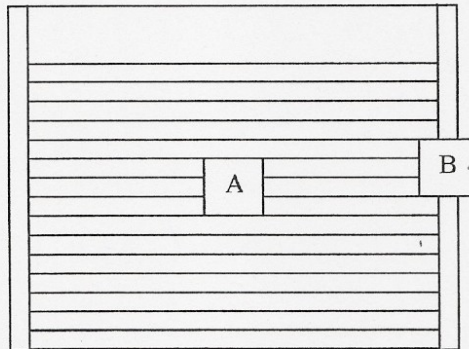
Brush Type: (2) rows on each end retention vertical track, total 190.5" each.

Additional Description -

Specimen A2 was tested per Static Air requirements of DCBCCD protocol PA 202 - 94. Specimens B, C, D were tested per the Impact and Fatigue requirements of DCBCCD protocols PA 201 / 203 - 94.

STATIC AIR PRESSURE TESTS

Static Tests were conducted in accordance DCBCCD PA 202 - 94
Qualifying ASTM E 330



Design Loads		+ 100.0 psf, - 100.0 psf. Specimen A2						(WRM)
Positive loads	time (sec.)	psf	max. def. at "A"	perm set at "A"	% recovery at "A"	max. def. at "B"	perm set at "B"	% recovery at "B"
1/2 Test	30	75.0	8.812"	0.687"	92%	0.729"	0.074"	90%
Design	30	100.0	9.062"	0.312"	97%	0.873"	0.004"	95%
Test	30	150.0	11.937"	1"	92%	2.076"	0.398"	81%

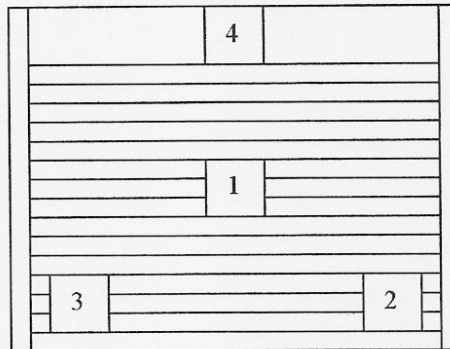
Negative loads	time	psf	max. def.	perm set	% recovery	max. def.	perm set	% recovery
	(sec.)		at "A"	at "A"	at "A"	at "B"	at "B"	at "B"
1/2 Test	30	75.0	8.625"	0.625"	92%	0.686"	0.066"	90%
Design	30	100.0	9.375"	0.375"	96%	0.224"	0.026"	88%
Test	30	150.0	11.062"	0.437"	96%	0.121"	0.016"	87%

Note: Specimen A failed, a 5/8" x 3" carbon steel Power bolt was replaced with a 3/4" x 5-1/2" wedge concrete anchor at the bottom post base channel. Specimen was renamed A1, but failed again. The 5/8" x 3" carbon steel Power bolt was replaced with a 3/4" x 5-1/2" wedge concrete anchor at the top post base channel. Specimen was renamed A2 and tested for Static Air Tests successfully.

IMPACT TEST - LARGE MISSILE

Impact tests were conducted in accordance with DCBCCD PA 201 - 94

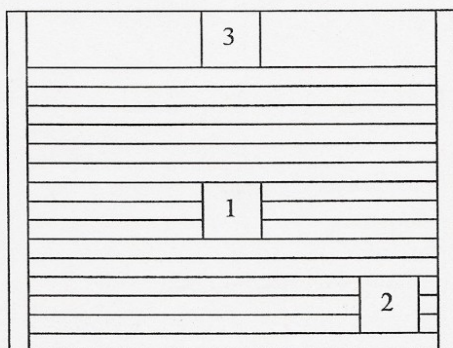
Specimen B (HH)



SPEED FT/SEC

- 1). 50.6 2). 50.0 3). 50.2 4). 50.1

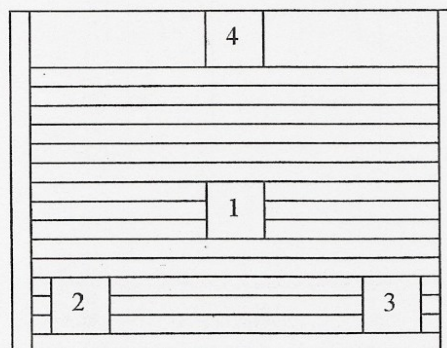
Specimen C (WRM)



SPEED FT/SEC

- 1). 50.6 2). 50.1 3). 51.8

Specimen D (HH)



SPEED FT/SEC

- 1). 50.5 2). 50.6 3). 50.6 4). 50.8

Type and weight of missile: # 2 Southern Yellow Pine 2x4, Length approx. 89-5/16" & 9 lb.

Description of specimens after impact test:

- B. The first impact was made in the center of the shutter. The second impact was made in the lower right corner of the shutter. The third impact was made in the lower left corner of the shutter. The fourth impact was made in the center of the shutter box cover. None of the impacts penetrated the specimen.

Result Passed

- C. The first impact was made in the center of the shutter. The second impact was made in the lower right corner of the shutter. The third impact was made in the center of the shutter box cover. None of the impacts penetrated the specimen.

Result Passed

- D. The first impact was made in the center of the shutter. The second impact was made in the lower left corner of the shutter. The third impact was made in the lower right corner of the shutter. The fourth impact was made in the center of the shutter box cover. None of the impacts penetrated the specimen.

Result PassedFATIGUE LOADING TEST

Fatigue Loading was conducted in accordance with DCBCCD PA 203-94

Design Load + 100.0 psf Specimen B (HH)

Loads	50 psf	60 psf	130 psf			
Cycle #	0-600	601-670	671			
	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Perm. set</u>	<u>Recovery</u>	<u>cycles/min</u>
	6-7/16"	6-15/16"	10-3/8"	7/8"	92%	26

Design Load - 100.0 psf

Loads	50 psf	60 psf	130 psf			
Cycle #	0-600	601-670	671			
	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Perm. set</u>	<u>Recovery</u>	<u>cycles/min</u>
	8-9/16"	9-1/16"	12-1/16"	1-1/16"	91%	31

Design Load + 100.0 psf Specimen C (WRM)

Loads	50 psf	60 psf	130 psf			
Cycle #	0-600	601-670	671			
	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Perm. set</u>	<u>Recovery</u>	<u>cycles/min</u>
	6-5/8"	6-7/8"	10-1/16"	5/8"	94%	37

Key: 10/16/2000

Design Load - 100.0 psf

Loads	50 psf	60 psf	130 psf			
Cycle #	0-600	601-670	671			
	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Perm. set</u>	<u>Recovery</u>	<u>cycles/min</u>
	8-5/8"	9-1/2"	12-3/8"	1/2"	96%	22

Design Load + 100.0 psf**Specimen D**

(HH)

Loads	50 psf	60 psf	130 psf			
Cycle #	0-600	601-670	671			
	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Perm. set</u>	<u>Recovery</u>	<u>cycles/min</u>
	7-3/16"	7-9/16"	11"	3/4"	93%	19

Design Load - 100.0 psf

Loads	50 psf	60 psf	130 psf			
Cycle #	0-600	601-670	671			
	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Max. Defl.</u>	<u>Perm. set</u>	<u>Recovery</u>	<u>cycles/min</u>
	7-3/16"	7-9/16"	12-9/16"	1-1/16"	92%	18

Key Hatcher
6-16-2000

2 mill polyethylene film was used on the cycle tests and it is the opinion of the undersigned that they had no influence on the results of these tests.

Observers - 3/7, 3/14, 3/15, 3/16, 3/17, 3/22, 3/24/00

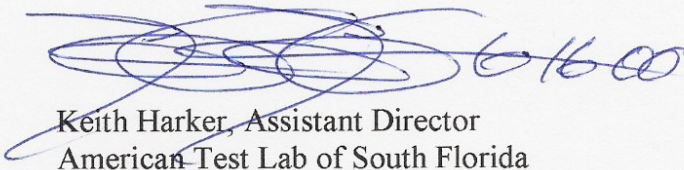
William R. Mehner - PE 3/7, 3/14, 3/15, 3/17, 3/22/00

Henry Hattem - PE 3/16, 3/24/00

Tony Sivore, Keith Harker, Jeremy Sivore - ATLSF

The PA 201-94, PA 202-94 and PA 203-94 tests reported have been performed in full accordance to the requirements of Dade County, with no deviations.

Dade County Witness: Not present



Keith Harker, Assistant Director
American Test Lab of South Florida

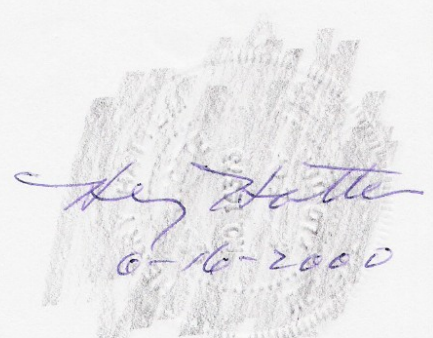


All Tests Certified and Witnessed by:

Engineer Seal & Signature

William R. Mehner
6795 N. W. 17 Avenue
Fort Lauderdale, FL 33309
State of Florida:
Registered Engineer P.E. #7496

Henry Hattem
2154 Baton Rouge
Weston, FL 33326
State of Florida:
Registered Engineer P.E. #0014373



Drawing # S-1299-EG, pages 1 thru 2, and components drawings as verified and marked with the ATLSF stamp are a part of this report.

Disclaimer: This test report was prepared by American Test Lab of South Florida (ATLSF), for the exclusive use of the above named client, it does not constitute certification of this product. The results are for that particular specimen tested and does not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. ATLSF is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed.



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Phone (954) 973-0808 Fax (954) 973-0823
Web - www.atlsf.com E-Mail - info@atlsf.com

Date: 06/15/00

Letter of compliance

Client: Roll-A-Way

ATL Report number ATLSF # 0126.01-00

The PA 201-94 and PA203-94 tests reported in report number ATLSF # 0126.01-00 have been performed in full accordance to the requirements of Dade County, with no deviation.

A handwritten signature in blue ink, appearing to read "Keith Harker", with the date "6/16/00" written below it.

Keith Harker,
Assistant Director

A circular engineer's seal for the State of Florida, with a handwritten signature in blue ink over it. The date "6/15/2000" is written next to the signature.

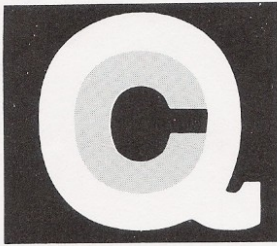
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State of Florida:
Registered Engineer P.E. #7496

Henry Hattem
2154 Baton Rouge
Weston, FL 33326
State of Florida:
Registered Engineer P.E. #0014373

Engineer Seal & Signature

A circular engineer's seal for the State of Florida, with a handwritten signature in blue ink over it. The date "6-16-2000" is written next to the signature.



METALLURGICAL, INC.

Home Office

2870 Stirling Road • Hollywood, FL 33020-1199

954/925-0499 • Miami 305/949-3166 • Fax 954/925-0988

INSPECTION REPORT

DATE June 12, 2000

QCM JOB# OEM-865 CUSTOMER American Test Lab

DESCRIPTION of So. Florida Inc.

CUSTOMER ORDER# Verbal

MATERIAL _____

INSPECTION SPECIFIED Tensile Test

APPLICABLE SPECIFICATIONS _____

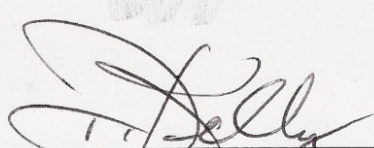
RESULTS OF INSPECTION

TENSILE TEST

Sample	Gauge/Width		Area	T/(KSI)	Y/(KSI)	%EL
1-A	.0415	.502	.021	34.4	29.3	10
2-A	.042	.502	.021	34.0	29.0	10
3-A	.042	.502	.021	33.8	28.6	12

Q C Metallurgical, Inc. assumes no responsibility
for losses of any kind due to interpretations.

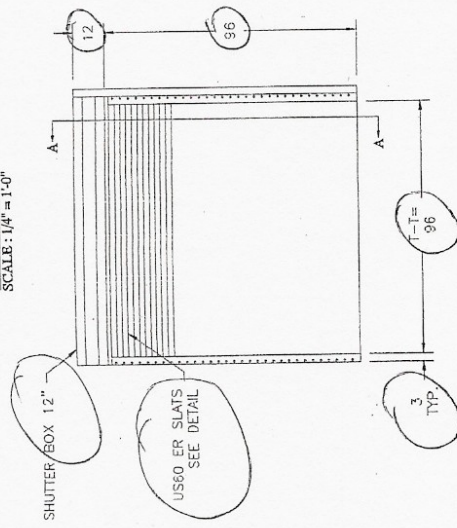
mmf

BY 
Robert Kelly

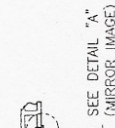
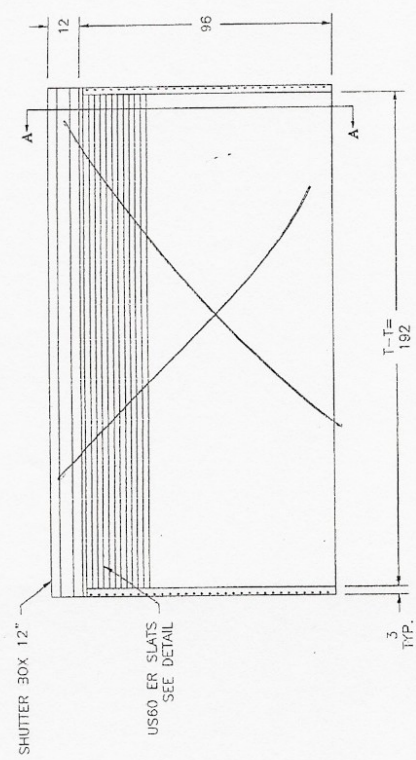
FORM #27

DRAWING NO. S-1299-EG SCALE: AS NOTED SHEET 1 OF 2		TITLE: ENGINEERING TEST SHUTTER COPYRIGHT © 1998 VALCO ENTERPRISES, LTD. 10901 OAK STREET N.E. ST. PETERSBURG, FL 33716	
DATE: 2-24-00 APPROVED: PHW EST. WFO: 2-24-00	REV: - UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES DECIMALS: .005 ANGULAR: .1° FRACTIONS: > 12" 1/16 > 12" 1/8	THIRD ANGLE PROJECTION UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES DECIMALS: .005 ANGULAR: .1° FRACTIONS: > 12" 1/16 > 12" 1/8	
REVISION DESCRIPTION REV: A, B, C, D, E			

TEST SHUTTER #2
SCALE: 1/4" = 1'-0"

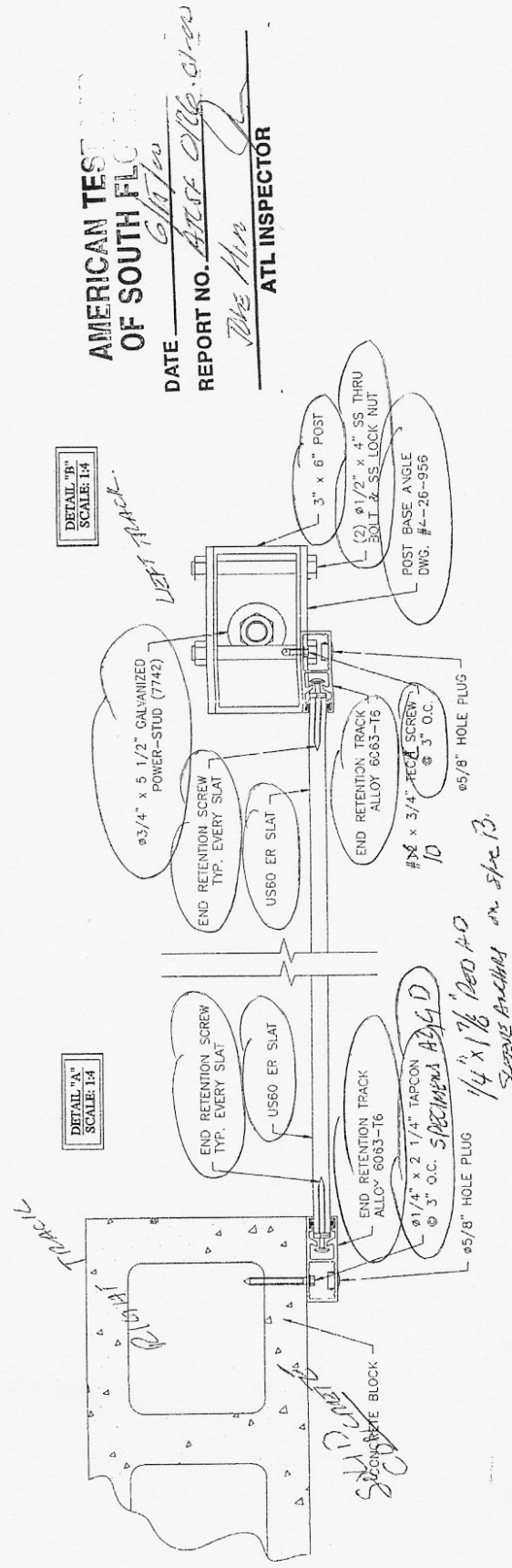


TEST SHUTTER #1
SCALE: 1/4" = 1'-0"



DETAIL "B"
SCALE: 1/4"

DETAIL "A"
SCALE: 1/4"



AMERICAN TEST
 OF SOUTH FLORIDA
 DATE: 6/17/00
 REPORT NO. ATL-016-01-00
 ATL INSPECTOR: Tom Hine

1/4" x 1/8" 1000 P.O.
 SPECIMENS ADDED
 1/4" x 1/8" 1000 P.O.
 SPECIMENS ADDED
 on Apr 13.

REVISION DESCRIPTION REV A B C D E	UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES DECIMALS .001 FRACTIONS 1/16 ANGULAR 1° TOLERANCES ± .125 UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN MILLIMETERS DECIMALS .001 FRACTIONS 1/16 ANGULAR 1° TOLERANCES ± .125	POLLA-WAY 10801 OAK STREET N.E. ST. PETERSBURG, FL 33716 COPYRIGHT © 1998 VALCO ENTERPRISES, LTD.	DRAWING NO. S-1299-BG SCALE AS NOTED SHEET 2 OF 2	DRAWN: PHW DATE: 2-2-00 APPROVED: DFW DATE: 2-24-00 EST. WFL LAST
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