



H.P. White Laboratory Inc.

3114 Scarboro Road • Street, Maryland 21154-1822

PHONE (410) 838-6550

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• FAX COVER LETTER •

PLEASE DELIVER THE FOLLOWING PAGE(S)

TO:

NAME: Dale McClellan

COMPANY: STS Security Products, LLC

FAX NO.: 208-693-9692

PHONE NO.: _____

FROM:

NAME: Craig Dunn

COMPANY: _____ JOB NO.: _____

Total number of pages including cover letter: 5

Date: 4/19/05 Originals: XX will _____ will not follow VIA mail.

If you did not receive all pages, please call the following
number as soon as possible: (410) 838-6550

H.P. WHITE LABORATORY, INC.

3114 Scarboro Road
 Street, Maryland 21154-1822
 Telephone: (410) 838-6550
 Facsimile: (410) 838-2802
 email: info@hpwhite.com
 www.hpwhite.com



18 April 2005
 (HPWLJ 9771-01A)

STS Security Products, LLC
 5190 Cleveland Street
 Virginia Beach, VA 23462

Attention: Dale McClellan

Gentlemen:

In accordance with your instructions, H.P. White Laboratory, Inc. conducted ballistic resistance testing of one MASSST and one MASSCR Security Shield attached with OBI received 15 April 2005 via your representative.

Testing was conducted in accordance with your instructions, and the modified provisions of NIJ-STD-0108.01, BALLISTIC RESISTANT PROTECTIVE MATERIALS, dated September 1985, Level IV, using caliber .30-06 Springfield, 166 grain, AP, M2 ammunition. The test sample was rigidly fixtured on an indoor range 50.0 feet from the muzzle of a test barrel to produce zero degree obliquity impacts. Photoelectric lumiline screens were positioned at 6.5 and 9.5 feet which, in conjunction with elapsed time counters (chronographs), were used to compute projectile velocities 8.0 feet forward of the muzzle. Penetrations were determined by visual examination of a 0.020 inch thickness alloy 2024T3 aluminum witness panel positioned 6.0 inches behind, and parallel to, the test sample. Table I presents a summary of the attached data record.

TABLE I. SUMMARY OF RESULTS

Test Sample		Ballistic Threat				Penetration	
Number	Size (in)	Obliquity (degrees)	Caliber	Shots	Velocity (fps)		
					Maximum		Minimum
HPW-1	46x51	0	.30 AP, M2	6(a)	2859	2814	0

(a) See enclosed data record for impact location.

Based on the data presented in Table I, the test sample submitted for testing SATISFIED the modified ballistic resistance requirements of NIJ-STD-0108.01, Level IV. This report is based on data obtained from having tested only the sample submitted, and should NOT be interpreted as an endorsement by H.P. White Laboratory, Inc. of the continuing quality, or performance, of any other items of the same, or similar, design.

The test sample was returned to the custody of your representative. Should you have any questions regarding this matter, or if we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P. White Laboratory, Inc.

Craig B. Dunn

CBD/tc
 Enclosure



H.P. White Laboratory, Inc.

BALLISTIC RESISTANCE TEST

Client : STS SECURITY PRODUCTS, LLC

Job No. : 9771-01

Test Date : 4/15/05

TEST PANEL

Manufacturer : STS SECURITY PRODUCTS, LLC

Sample No. : HPW-1

Size : 46 x 51 in.

Weight : NA lbs.

Date Rec'd. : 04-15-05

Thicknesses : NA

Hardness : NA

Via : Hand Carried

Avg. Thick. : NA

Plies/Laminates : NA

Returned : Hand Carried

Description : ONE MASSST AND ONE MASSCR SECURITY SHIELD ATTACHED WITH OBI CONNECTORS

SET-UP

Shot Spacing : PER CUSTOMER REQUEST

Primary Vel. Screens : 6.5 ft., 9.5 ft.

Range No. : 5

Witness Panel : 0.020", 2024-T3 ALUMINUM

Primary Vel. Location : 8.0 ft. From Muzzle

Temp. : 69 F

Obliquity : 0 deg.

Residual Vel. Screens : NA

BP : 30.06 in. Hg

Backing Material : NA

Residual Vel. Location : NA

RH : 32%

Conditioning : AMBIENT

Range to Target : 50.0 ft.

Barrel No./Gun : TEST BARREL

Target to Wit. : 6.0 in.

Gunner : B. WILLIAMSON

Recorder : UNGER

AMMUNITION

(1) : CAL. .30 AP, M2, 166 gr.

Lot No. : LCL 104452

(2) :

Lot No. :

(3) :

Lot No. :

(4) :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : NIJ-STD-0108.01(ASSEMBLY)

(2) : LEVEL IV

(3) : REQUIRED VELOCITY: 2800-2900 fps.

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	1049	2860	1050	2857	2859	None	(a)
2	1	1062	2825	1065	2817	2821	None	(b)
3	1	1065	2817	1067	2812	2814	None	(b)
4	1	1056	2841	1057	2838	2840	None	(c)
5	1	1056	2841	1060	2830	2836	None	(d)
6	1	1060	2830	1061	2828	2829	None	(e)

REMARKS :

FOOTNOTES :

- (a) SHOT PLACED ON FRONT OF BARRICADE.
- (b) SHOT PLACED ON SEAM IN MIDDLE.
- (c) SHOT PLACED ON STUD.
- (d) SHOT PLACED ON FRONT SUPPORT SEAM.
- (e) SHOT PLACE ON LEFT SIDE SEAM.

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18 April 2005
 (HPWLI 9771-01B)

STS Security Products, LLC
 5190 Cleveland Street
 Virginia Beach, VA 23462

Attention: Dale McClellan

Gentlemen:

In accordance with your instructions, H.P. White Laboratory, Inc. conducted ballistic resistance testing of one MASSST and one MASSCR Security Shield attached with OBI received 15 April 2005 via your representative.

Testing was conducted in accordance with the provisions of UL-752, STANDARD FOR BULLET RESISTING EQUIPMENT, Tenth Edition, dated 10 March 2000, Level 8, Paragraph 15 (Assemblies), using caliber 7.62x51mm, 150 grain, M80, Ball ammunition. The test sample was mounted on an indoor range 15.0 feet from the muzzle of a test barrel to produce zero degree obliquity impacts. Photoelectric lumiline screens were positioned at 5.0 and 10.0 feet which, in conjunction with elapsed time counters (chronographs), were used to compute projectile velocities 7.5 feet from the muzzle. Penetrations were determined by visual examination of a 1/8 inch thick corrugated cardboard witness panel positioned 18.0 inches behind, and parallel to, the test sample. Table I provides a summary of the enclosed data record.

TABLE I. SUMMARY OF RESULTS

Test Sample		Ballistic Threat			Results		
Number	Size	Obliquity	Caliber	Shots	Velocity Max. Min.	Penetration	
HPW-2	46x51	0	7.62, M80	7(a)	2938 2887	0	
(a) See data sheet for shot location.							

In accordance with our policy, we attempted to maintain the velocity of the impact in the upper half of the specified range of velocities to reduce any effect the broad range of those velocities might have on the repeatability of results.

Based upon the data presented in Table I, the test sample submitted for testing SATISFIED the provisions of UL-752, STANDARD FOR BULLET RESISTING EQUIPMENT, Tenth Edition, dated 10 March 2000, Level 8, Paragraph 15 (Assemblies). This conclusion is based on data obtained from having tested only the sample submitted, and should NOT be interpreted as an endorsement by H.P. White Laboratory, Inc. of the continuing quality, or performance, of any other items of the same, or similar, design.

The test sample was returned to the custody of your representative. Should you have any questions regarding this matter, or if we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P. White Laboratory, Inc.

Craig B. Dunn

CBD/tc
 Enclosure



H.P. White Laboratory, Inc.

BALLISTIC RESISTANCE TEST

Client : STS SECURITY PRODUCTS, LLC

Job No. : 9771-01

Test Date : 4/15/05

TEST PANEL

Manufacturer : STS SECURITY PRODUCTS, LLC

Size : 46 x 51 in.

Thicknesses : NA

Avg. Thick. : NA

Description : ONE MASSST AND ONE MASSCR SECURITY SHIELD ATTACHED WITH OBI CONNECTORS

Sample No. : HPW-2

Weight : NA lbs.

Hardness : NA

Plies/Laminates : NA

Date Rec'd. : 04-15-05

Via : Hand Carried

Returned : Hand Carried

SET-UP

Shot Spacing : PER UL-752 (ASSEMBLY)

Witness Panel : 1/8" CORRUGATED CARDBOARD

Obliquity : 0 deg.

Backing Material : NA

Conditioning : AMBIENT

Primary Vel. Screens : 5.0 ft., 10.0 ft.

Primary Vel. Location : 7.5 ft. From Muzzle

Residual Vel. Screens : NA

Residual Vel. Location : NA

Range to Target : 15.0 ft.

Target to Wit. : 18.0 in.

Range No. : 5

Temp. : 69 F

BP : 30.06 in. Hg

RH : 32%

Barrel No./Gun : TEST BARREL

Gunner : B. WILLIAMSON

Recorder : UNGER

AMMUNITION

(1) : 7.62mm Ball, M80 COPPER, 150 gr.

(2) :

(3) :

(4) :

Lot No. : SPFER 1002018

Lot No. :

Lot No. :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : UL-752 (ASSEMBLY)

(2) : LEVEL 8

(3) : REQUIRED VELOCITY: 2750-3025 fps.

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	1705	2933	1709	2926	2929	None	(a)
2	1	1721	2905	1723	2902	2904	None	(a)
3	1	1702	2938	1704	2934	2936	None	(a)
4	1	1702	2938	1702	2938	2938	None	(a)
5	1	1731	2889	1733	2886	2887	None	(a)
6	1	1712	2921	1715	2915	2916	None	(b)
7	1	1714	2917	1715	2916	2916	None	(c)

REMARKS :

FOOTNOTES :

- (a) FOUR SHOTS ON A 4.5" SQUARE, 1 IN CENTER
 (b) SHOT PLACED ON SEAM IN MIDDLE.
 (c) SHOT PLACE ON LEFT SIDE SEAM.

TEST CERTIFICATE



PAGE NO: 01 OF 01
 FILE NO: 3526-03-06
 DATE: 03/09/99
 MILL ORDER NO: 93702-001

CUSTOMER P.O.: 21105
 DESCRIPTION: 1 - RECTANGLE .375 -X- 96 -X- 288

22223

SEND TO: HEFLIN STEEL SUPPLY CO. P.O. BOX 1249 PHOENIX AZ 85001
 HEFLIN STEEL SUPPLY CO. P.O. BOX 1249 PHOENIX AZ 85001
 HEFLIN STEEL COMPANY CLIC #0217, EAST END PHOENIX AZ 85007

THE MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH PURCHASE ORDER REQUIREMENTS AND SPECIFICATIONS:

HFLIN REM-500 REV 2 YR 95

MATERIAL PRODUCED UNDER A CERTIFIED QUALITY MGMT SYSTEM COMPLYING WITH ISO 9002 ABS-QE CERT. NO. 30130

CHEMICAL ANALYSIS													PRACTICES		
MELT/SLAB	C	MN	P	S	CU	SI	NI	CR	MO	V	TI	B	CB	PRACTICES	
R0959	.29	.66	.008	.001	.25	.50	.60	.27	.24	.002	.033	.0023	.001	GS 7-8 FINELINE	

TENSILES										CHARPY V IMPACTS				OTHER TESTS PERFORMED	
YLD	TENS	% ELONG	% R.A.	TYPE	TEMP	MILS LATERAL EXPANSION	% SHEAR	MATL	TEST	NOM TEMP	MIN TEMP	MAX TEMP	HOLD MINS	COOL METHOD	FAHR END TEMP
								X	1660				0022	HQ	
								X	0402				0038	AC	

INFORMATION

WEIGHT PER PIECE = 2940 LBS. 1336 KG.
 ALL STEEL HAS BEEN MELTED AND MANUFACTURED IN THE U.S.A.
 MATERIAL HAS BEEN VACUUM DEGASSED AND CALCIUM TREATED FOR SULFIDE SHAPE CONTROL.
 FINELINE MOD FOR SULPHUR
 BRINELL TESTING WAS PERFORMED USING A CARBIDE BALL (HBW).
 B/L 244288 NOKL 2913

WE HEREBY CERTIFY THE ABOVE INFORMATION IS CORRECT:
 FORM NO. 2221T (R 7/98)
 Quality Assurance Laboratory
 Coatesville, PA 19320
 SUPERVISOR - TEST REPORTING
Elmer J. ...