

DATE OF TRANSLATION: 16-Apr-20
ELECTRONIC FILE NAME: STANAG2920_VPROOF_certification
SOURCE LANGUAGE: Italian
TARGET LANGUAGE: English (US)
TRANSPERFECT JOB ID: US0683516

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***National Proof House for Small Firearms
and Commercial Munitions***

[emblem:] CAVENDO TUTUS

PUBLIC AGENCY
INSTITUTED WITH ROYAL DECREE NO. 20 OF 01/13/1910 - REORDERED WITH LAW NO. 186 OF 02/23/1960
AND LAW NO. 317 OF 03/14/1968 GARDONE VALTROMPIA - (BS) - ITALY

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To:

ShotStop Ballistics, LLC

1000 Campus Drive,
300, Stow OH 44224, USA

Mailing Address: P.O. Box 1393, Stow, OH 44224

Ref. No. 00018-2020/PS-2/BAL - EP/vp

Gardone V.T., February 12, 2020

SUBJECT: proof of resistance to penetration of projectiles, performed on "SHOT STOP" brand body armor plates, "DURITIUM IV+HS model HS1RF3SC" type, according to the methods set out by "NATO STANDARD AEP 2920" of JUNE 2015-VPROOF.

The proofs were executed at our Ballistics Laboratory on **February 7, 2020** on **8 ballistic plates** provided by you on a **"Stand Alone"** basis. The composition of the plate is shown in the document attached to the letter **Ref. 01/2020** of **01/20/2020**, issued by the company

Proof Specifications and Procedure

Official Method	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Standard method	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Identification method	In accordance with "NATO STANDARD AEP -2920" of 2015	
Velocity measurement uncertainty U The uncertainty expressed is understood as expanded measurement uncertainty of the results with a 95% confidence level, coverage factor k=2	0.72 m/s	
Description and Identification of object subjected to proof	Body armor plates, characterized by resistance to attacks from specific arms and ammunition	
Sample quantity	[delete] 08	
Sampling method	Sampled and provided by the customer	
Date of receipt	01/28/2020	
Date of proof execution	02/07/2020	
Environmental conditions	Temperature: 21°C - Relative humidity: 50 RH%	

M 7 28 N Nov. 04 Rev. 1

The marks stamped on the arms proofed by this House are officially recognized by Nations that are signatories to the International Convention of Brussels of July 1, 1969 for the mutual recognition of proof marks from Proof Houses

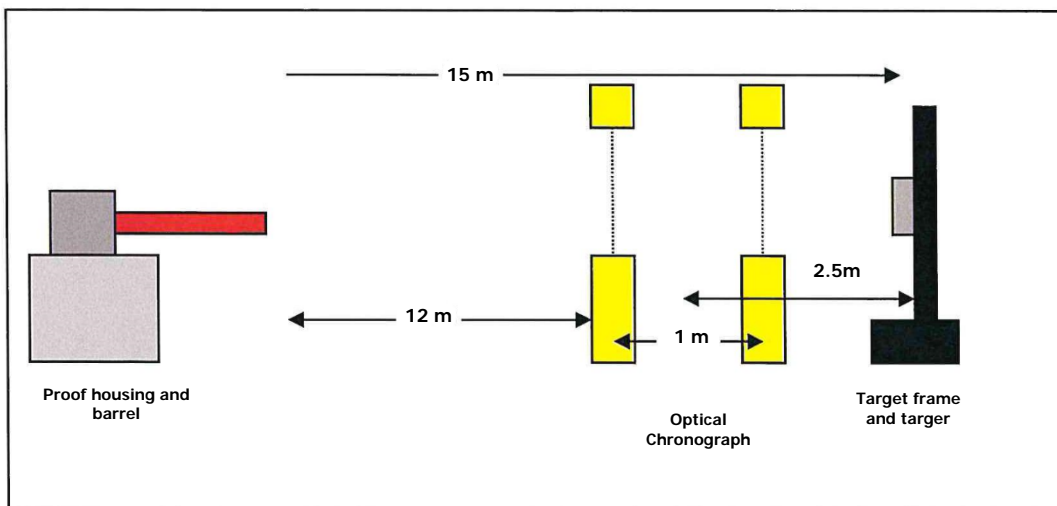
STANDARD

As set out by the Standard under Chapter 5, the plates, before executing the shooting proofs, are stored for a minimum of 6 hours at a temperature of 20° with a tolerance of $\pm 2^{\circ}\text{C}$ and a Relative Humidity between 40% and 70%.

For shooting proofs, the plates are supported and fixed, using rubber bands, to a 610 mm x 610 mm x 140 mm flat plasticine block, inserted into a 730 x 730 x 140 mm frame made with steel tubes, fixed to a metal support anchored to the ground. These were struck by three 7.62 x 54mmR caliber projectiles of the type defined in annex B) at Point C6) of Table B1), shot according to the procedure established in Point 5.8.6) at a distance of 15 meters, as established in Point 5.8.1) and detecting Velocity at 12.5 meters live from the muzzle flash.

Testing the plates was done using a new plasticine block whose consistency was verified before and after the shooting tests. This operation was executed in compliance with annex N) of the Standard, dropping a steel ball weighing 1.043 g with a diameter of 63.5 mm from a height of 2 meters. Its impact on the plasticine resulted in imprints with a depth was between 17 and 21 mm, values that fall within the established limits.

With every strike, the velocity $V_{12.5}$ was detected, and kinetic energy $E_{12.5}$ was calculated at 12.5 meters from the muzzle of the weapon, as represented in the diagram below; furthermore, the depth of the impression left by the impact of each projectile in each block of plasticine was also measured.



8 plates were presented, submitted in accordance with the "NATO STANDARD AEP 2920 of JUNE 2015" to the following proofs:

- the "DROP TEST", following the procedures indicated in annex M) of the relevant Standard;
- the shooting proof "VPROOF MULTI HIT" Level C6), for a total of 22 strikes, 3 per plate.

INFORMATION RECEIVED FROM THE CUSTOMER

The commercial name of the plates, jointly with the "VPROOF", which was declared to be **854 m/s**, is shown in your letter of 01/20/2020, Ref. 01/2020.

WEAPONS AND AMMUNITION USED

Weapon: 7.62 x 54mmR caliber;

Cartridges: cal. 7.62 x 54mmR loaded with projectile "API — B32" type "AP" of 10.4 g.

RESULTS

The results are stated in detail in the report below:

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CONTINUED LETTER REF. NO. N° 00018-2020/PS-2/BAL OF 02/12/2020

TO: ShotStop Ballistics, LLC - Stow OH 44224, USA -

WORKSHEET

ML	5_02 A	Report No.	029/2020
Rev.	0	Date:	02/07/2020
Add.	05/04/15		

INSTRUMENTS USED							
ANA02 Analyzer	✓	MB01 Ribbon	✓	0.02 mm Witness sheet		B01 Photocell	
BL26 Scale	✓	Goniometric Bubble	✓	0.5 mm Witness sheet		B04 Photocell	✓
ML02 Laser	✓	T1M03 Thermo-hygrometer	✓	Plasticine	✓	B03 Photocell	
Customer:	SHOTSTOP BALLISTICS LLC, STOW OH 44224 USA -						
Sample from:	CUSTOMER						
Sample code and description:	SN. RIGID PLATE 1-2-3-4-5-6-7-8						
	Dimensions (mm): 300x250			Weight (Kg): 2.35			
Reference standard:	CUSTOMER						
Munition used:	7.62x54mmR caliber A.P.I. 10.4 g. bullet						
Nominal Velocity [m/s]	Velocity Tolerance [m/s]		Measurement uncertainty [m/s]		Weight tolerance [g]		
854	+	20	0.72		±	0.1	
Start date and time of sample storage:		02/06/2020	11.00	Sample distance (m):		15	
End date and time of sample storage:		02/07/2020	10.00	Velocity detected at (m):		12.5	
Date and time of proof execution:		02/07/2020	10.00	Sample Temperature:		21°C	
Plasticine Drop test:		18 - 17 - 18		Environmental Conditions		21°C 50 RH%	
Operator responsible for loading:			Salvatore Alonge		Operator responsible for shooting: Alberto Secchi		

NUMBER	V1 [m/s]	VC [m/s]	BFS [mm]	COMPLETE PROOF	VALID
1	861.94	859.44	29.0	N	Y
2	861.79	859.29	38.0	N	Y
3	866.87	864.37	34.0	N	Y
4	871.19	868.69	31.0	N	Y
5	869.94	867.44	32.0	N	Y
6	857.14	854.64	37.0	N	Y
7	867.19	864.69	32.0	N	Y
8	872.09	869.59	38.0	N	Y
9	870.78	868.28	42.0	N	Y
10	864.58	862.08	32.0	N	Y
11	861.44	858.94	38.0	N	Y
12	869.26	866.76	39.0	N	Y
13	874.07	871.57	40.0	N	Y
14	870.25	867.75	31.0	N	Y
15	870.87	868.37	43.0	N	Y
16	860.73	858.23	38.0	N	Y
17	870.53	868.03	38.0	N	Y
18	866.76	864.26	42.0	N	Y
19	866.31	863.81	32.0	N	Y
20	865.73	863.23	40.0	N	Y
21	857.93	855.43	42.0	N	Y
22	865.05	862.55	31.0	N	Y
23	858.48	855.98	40.0	N	Y
24	863.04	860.54	39.0	N	Y

AVERAGE	866.0	863.5	36.6		
MIN	857.1	854.6	29.0		
MAX	874.1	871.6	43.0		
RANGE	16.9	16.9	14.0		
STD. DEV.	4.8	4.8	4.3		
C95%	2.0	2.0	1.8		

Disposition of strikes:

NOTES:
EACH PLATE WAS SUBJECTED TO THE DROP TEST (2 IMPACTS)

All proof conditions conform to the requested proof method.

OUTCOME

All bullets were stopped. There was no leak of bullets or fragments of bullets from the rear face of the proof items after the impact of the bullets. The damage to the plasticine block, caused by the deformation of the plates due to the impact of the bullets was less than 44 mm.

DECLARATION OF CONFORMITY

The 8 ballistic plates produced by the company, "**ShotStop Ballistics, LLC**", "**DURITIUM IV+HS**" type, mode) **HS1RF3SC**, subjected to testing in accordance with "**VPROOF**" as described in "**NATO STANDARD AEP 2920**" of **JUNE 2015, LEVEL C6**, passed the tests executed, satisfying the requirements of **Point 7.1), Table 7.1)**; in fact the Velocities detected are included in the declared "**VPROOF**" of **854 m/s** and this value plus **20 m/s**, a number of projectiles greater than **22** were stopped, these caused damage in the plasticine, whose depth did not exceed **44 mm**, the maximum limit allowed.

THE DIRECTOR
(Emanuele Paniz)
[signature]

[stamp:] NATIONAL PROOF HOUSE FOR SMALL ARMS AND COMMERCIAL AMMUNITION -
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