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Research (LBO)
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Test certificate *

The test has been carried out according to STANAG 2920

Assignor Lyra (pvt)
L-14, block 22
75950 Karachi
Pakistan

Experiment date 24-05-2007

Project Fabric

Sample identification SAMPLE - 510

Subject

Ballistic experiments

Date

29-05-2007

Reference

07MB03511

Contact

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The Standard Conditions for Research
Instructions given to TNO, as filed at
the Registry of the District Court and
the Chamber of Commerce in The
Hague shall apply to all instructions
given to TNO.

For details see page 2 upto page 3.

The sample has been tested with 1.1 g. FSP projectiles and has a ballistic limit velocity (V50) of 522 m/s with a standard deviation (SD) of 13 m/s.

A handwritten signature in blue ink, appearing to read 'MJB', is written over a horizontal line.

M.J.G. Bakker

Project leader

* This test certificate can not be used as a product certification



Test certificate number 07MB03511

Assignor Lyra (pvt)

page 2 of 3

Experiment date 24-05-2007

Test results

Description of testmethod

Determination of the ballistic limit velocity (V_{50} value) of a sample material. The V_{50} value is defined as the arithmetic mean of the three lowest projectile velocities giving complete penetration and of the three highest velocities giving partial penetration. These velocities should fall within a bracket of 40 m/s (STANAG 2920, ed. 2).

Results

SAMPLE - 510 (07MB03511) : STANAG 2920 - FSP - 1.1 g. FSP					
V50 [m/s]			Standaarddeviation [m/s]		
522			13		
Shot number	Impact velocity [m/s]	Stop / Perforation	Vr [m/s]	Valid (Yes/No)	Used
KKW2 07SN04825	530	Stopped	0	Yes	*
KKW2 07SN04826	595	Perforation	0	Yes	
KKW2 07SN04827	567	Perforation	0	Yes	
KKW2 07SN04828	564	Perforation	0	Yes	
KKW2 07SN04829	542	Perforation	0	Yes	
KKW2 07SN04830	510	Perforation	0	Yes	*
KKW2 07SN04831	487	Stopped	0	Yes	
KKW2 07SN04832	527	Perforation	0	Yes	*
KKW2 07SN04833	502	Stopped	0	Yes	*
KKW2 07SN04834	534	Perforation	0	Yes	*
KKW2 07SN04835	531	Stopped	0	Yes	*
*: indicates velocity value within bracket and used for determination of the V_{50} value.					
Ballistic limit velocity		: $V_{50} = 522$ m/s			
Standard deviation		: S.d. = 13 m/s			

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Test certificate number 07MB03511
Assignor Lyra (pvt)

page 3 of 3

Experiment date 24-05-2007

Sample specifications

Assignor identification : SAMPLE - 510
TNO identification : 07MB03511
Reference :
Date of arrival : 11-05-2007
Size : 410 x 410 mm²
Thickness : 6.5 mm
Weight : 733 gram
Areal mass : 4.4 kg/m²
Composition of sample in direction as encountered by
projectile (Specification assignor) : Ballistic Panel
Remarks : None

Test specifications

Experimental facility : Small Calibre Firing Range no. 2 Ypenburg
- temperature : 21 °C
- relative humidity : 51 %

Conditioning of sample material

- duration at least : 24 hours
- temperature : 18 - 22 °C
- relative humidity : 60 - 70 %
Remarks : none

Ballistic specifications

Weapon : SVB
- barrel length : 605 mm
- rifling twist : 1 : 10"
Projectile : 1.1 g. FSP
- weight : 1.1 gram
- calibre : 5.38 mm
- manufacturer : Bogner
Distance muzzle to target : 5.8 m
Target obliquity :

Other specifications

Contract number : 12416
Backing : None

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