

TEST REPORT N° 287-EN/20/BNE

on September 22nd, 2020

DELIVERED TO :

INDUSTEEL FRANCE, site du Creusot

56 rue Clémenceau

71201 LE CREUSOT Cedex FRANCE

PURPOSE : Validation of the protection level of armor one plate target according to the customer's specification dated on September 2nd, 2020.

TESTED SAMPLE(S): SAFE 500 thickness 6.50mm

TESTING DATE : September 16th, 2020

Publication : INDUSTEEL FRANCE – 2 copies

This test report certifies only to characteristics of the sample subjected to the tests and does not prejudge characteristics of similar products. It does not thus constitute a certification of product in the sense of the article L115-27 of the code of the consumption and the law of June 3rd, 1994.

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TESTED SAMPLE(S)

Two samples are supplied by the customer; only one is tested.

Sample number	213588 T02
Grade	SAFE 500
Cast	730011488
Nominal thickness (mm)	6.5
Real thickness (mm)	6.8
Size (mm)	914x305
Hardness (HB)	498

TESTING CONDITIONS

	September 16th, 2020
Shooting range temperature (°C)	21.4
Shooting range humidity (% RH)	56

Used equipment

Climatic enclosure: Air conditioned room
Target frame: BLINDAGE ETBS
Velocity measurement: RADAR BR3503 M-VIT-15
Carriage: PROTOTYPA STZA 14A n° 55

Test barrels calibers:

7.62x51 n° 6620, 650mm length, right hand twist, twist 305mm, 4 grooves
5.56x45 n° 4999, 650mm length, right hand twist, twist 178mm, 6 grooves

Ammunition calibers:

7.62x51 FJ(1)/PB/SC batch n° T-15-001
5.56x45 FJ²/PB/SCP1 batch n° 07F8061

Implementation

According to the EN 1523:1998, excepted that the tested material is not a window, door, shutter or blind.

The panel is tested at an angle of 0° NATO.

TESTING RESULTS

See the enclosed results sheet n° 30302.



CONCLUSION

The sample supplied by INDUSTRIEL CREUSOT has been submitted to the test according to the customer's specification.

The steel panel withstood three impacts of projectiles 7.62x51 FJ(1)/PB/SC and three impacts of projectiles 5.46x45 FJ(2)/PB/SCP1 of EN 1522:1998 level FB6, at 0° with no perforation of the witness foil (absence of splinters).

The director
M. BERTHEL





Les essais ont été réalisés selon la norme la Norme : NF EN 1522 / 1523 (1999)

Observations :

Cible(s) individuelle(s)			
N°	Référence BNE	Référence client	Composition client
1	RBM-20-2095	213588 T02	SFE 500

N°	Masse (kg)	Largeur (mm)	Longueur (mm)	Ep nominal (mm)	Ep réelle (mm)	N° de coulée	Dureté/ Nuance (HB)	Conditionnement		
								Temp (°C)	HR (%)	Durée (h)
1	14,95	914	305	6,5	6,8	730011488	HB 498			

Gaine de Tir N° : 1

Feuille témoin : 2024 T3 0,5mm

Humidité Gaine de tir : 56,0 %HR

Température Gaine de tir : 21,4 °C

Equipements de Contrôle, de Mesure, et d'Essai

Balance(s) : M-BAL-03 (12kg), M-BAL-12 (R2)

Affût(s) : PROTOTYPA STZA 14A N° 55

Enceinte(s) climatique(s) : Salle climatisée

Support(s) de cible : BLINDAGE ETBS

Métrologie Cplt : M-THR-24, M-MEX-10, M-RAP-02, M-REG-14, M-RUB-41, M-TEL-11

Equipement(s) de mesure de vitesse : RADAR BR3503 M-VIT-15

Présent(s) :

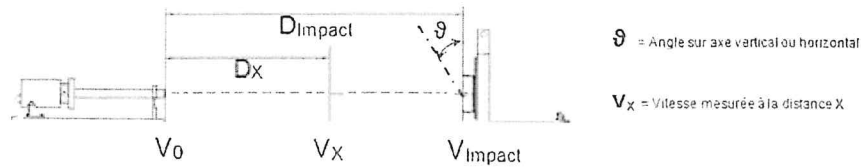
Technicien(s) : MME. BRUNEL / M. LUCETTE

Pauline BRUNEL
Technicienne Laboratoire



Essais de résistance à l'impact

Calibre	Canon N°	Longueur du canon (mm)	Nbre de rayures	Pas de rayures	Distance de mesure de vitesse Dx (m)	Distance impact D _{Impact} (m)
5,56 X 45	4999				7,5	10
7,62 X 51	6620				7,5	10



N°	Série	Tir	Calibre	Typ proj.	Lot	Incidence	V _{7,5} (m/s)	Protection	Observations
1	1	1	7,62 X 51	M80	T-15-001	0°	833,1	OUI	
		2	7,62 X 51	M80	T-15-001	0°	827,6	OUI	Distance entre 1-2 : 120 mm
		3	7,62 X 51	M80	T-15-001	0°	831,3	OUI	Distance entre 2-3 : 123 mm
		4	5,56 X 45	SS109	07F8061	0°	962,3	OUI	
		5	5,56 X 45	SS109	07F8061	0°	955,7	OUI	Distance entre 4-5: 125 mm
		6	5,56 X 45	SS109	07F8061	0°	959	OUI	Distance entre 5-6: 123 mm