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AD _____

Tests of Point Detonating Fuze T195E11 for 20mm Ammunition

PART A

SYNOPSIS

1. This test was conducted to determine the arming distance of the T195E11 fuze and to determine the functioning performance and sensitivity of this fuze in comparison with the 20mm Mk 78 Mod 0 fuze tested previously.

2. It is concluded that the subject fuze as assembled in the T39E3 tetryl loaded projectile:

a. Was not armed at 15 feet from the gun muzzle but was armed 90% of the time at 35 to 40 feet from the muzzle when fired with a muzzle velocity of 3300 ft/sec from a 1/25 caliber twist barrel.

b. Functioned satisfactorily with low and high striking velocities (1650 and 3200 ft/sec) against 0".020 24S-T3 aluminum alloy at obliquities of 0° to 80°, and against all thicker targets employed at obliquities of 0° to 45° with the exception of the range of thicknesses from 0".072 to 0".102 24S-T3 aluminum alloy at 0° obliquity where no fuze action occurred at high striking velocities (3200 ft/sec).

c. Functioned reliably against 0".125 24S-T3 aluminum alloy at obliquities between 60° and 75° at high striking velocities (3200 ft/sec).

d. Functioned 80% or better against 0".125 mild steel at obliquities between 60° and 80° at high striking velocities.

e. Functioned unreliably against 0".125 24S-T3 aluminum alloy at 80° obliquity at high striking velocities and at obliquities of 50° and 60° at low striking velocities.

f. In general, functioned unreliably against 0".375 24S-T4 aluminum alloy at obliquities between 60° and 80° at low and high striking velocities.

g. Had a minimum sensitivity thickness in 24S-T3 aluminum alloy of 0.020 or less for all obliquities up to and including 80° at low and high striking velocities.

h. Exhibited slightly delayed fuze action when fired against thin targets.

i. Gave no bore or flight premature detonations when fired as single rounds from the accuracy type barrels.

j. Showed no fuze action when fired at high striking velocities against 0.020 blotter paper at 0° obliquity or through a heavy rain.

k. Exhibited an overall functioning performance not appreciably different from the 20mm Mk 78 Mod 0 fuze with the exception that the subject T195E11 fuze showed no fuze action at high striking velocities against intermediate thicknesses (0.072 to 0.102) of 24S-T3 aluminum alloy at 0° obliquity.

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PART B

INTRODUCTION

1. AUTHORITY:

The subject test was conducted under reference (a), Task Assignment NPG-Re2b-327-1-53, as authorized by reference (b) and in accordance with reference (c).

2. REFERENCES:

a. BUORD Conf ltr Re2b-DELaP:bjn NP9 Ser 42738 of 29 July 1952
b. NOL Rest ltr TF:DEL:mew (NP/NOL/X1-1(369) ser 1390 of 6 April 1951
c. NOL Rest Work Request 6869A of 16 June 1952
d. NPG Conf Report No. 782 of 19 May 1951
e. NPG Conf Report No. 951 of 7 April 1952
f. NPG Rest ltr OTK:TWT:bas a11/2225-1 Ser 23260 of 17 September 1952 to BUORD
g. NPG Rest ltr OTK:TWT:esc A11/2b327-1 Ser 24180 of 19 November 1952 to BUORD

3. BACKGROUND:

The T195E11 point detonating fuze was developed by the Parke Thompson Associates in conjunction with the Ordnance Corps of the Department of the Army. In 1951 tests of the T195E6 fuze, the forerunner of the present fuze, were discontinued because of malfunctioning at low striking velocities and high obliquities. With a view toward use of the T195E11 fuze in the new 20mm Mk 12 gun, the Naval Ordnance Laboratory requested the Naval Proving Ground to perform tests of this fuze at conditions similar to those of previous tests of the 20mm Mk 78 Mod 0 fuze, to permit comparison between the results obtained and those reported in references (d), (e), (f) and (g). This report covers the functioning tests of the T195E11 fuze as requested by paragraphs 3 (a) and 3 (b) of reference (b) and paragraphs I and II of reference (c).

4. OBJECT OF TEST:

This test was conducted to determine the arming distance of the T195E11 fuze and to determine the functioning performance and sensitivity of this fuze in comparison with the Mk 78 Mod 0 fuze tested previously.

5. PERIOD OF TEST:

a.	Date of Authorizing Letter	6 April 1951
b.	Dates Material Received	18 June 1952 6 August 1952
c.	Date Commenced Test	20 June 1952
d.	Date Test Completed	3 October 1952

6. REPRESENTATIVES PRESENT:

One (1) or more of the following representatives from the Naval Ordnance Laboratory witnessed all tests with the exception of five (5) rounds fired on 27 June 1952.

Mr. D. E. Lord
Mr. E. L. Morgan
Mr. P. B. Morgan
Mr. C. A. Browning
Mr. R. A. Buck

PART C

DETAILS OF TEST

7. DESCRIPTION OF ITEM UNDER TEST:

The point detonating fuze T195E11 is described in detail in Parke Thompson Associates drawings C3351 and D3352 and in Ordnance Corps of the Army Drawings 73-2-333 and 73-2-334. It is a ball-rotor type fuze, has a "floating" or rebound type firing pin, and is armed by spin. It is designed for screw machine manufacture rather than die-casting and is assembled with a steel windshield.

8. DESCRIPTION OF TEST EQUIPMENT:

a. Projectiles:

(1) 20mm T39E3, Tetryl loaded, Lot PAE 5992

b. Guns, Cases, Powder:

(1) 20mm Accuracy Barrel No. FAD-1, 52.5" length, 1/25 twist, with T2 case and IMR 5010 Powder.

(2) 20mm Accuracy Barrel No. EX 154, 52.5" length, 1/13.5 twist, with T2 case and IMR 5010 powder.

c. Targets:

(1) Beaverboard (0".190-.58 lbs/ft^2)

(2) Aluminum alloy, 24S-T3 clad in thickness of 0".012

(3) Aluminum alloy, 24S-T3 or 24S-T4 in thickness of 0".020, 0".040, 0".072, 0".081, 0".102, 0".125, 0".250, 0".375, and 0".500.

(4) Cold rolled strip steel in thickness of 0".125 in dead soft temper at Rockwell B hardness 45 ± 7.

d. A 160' range with armor plate butt, target mounting jig and velocity measuring equipment.

9. PROCEDURE:

a. Functioning and Sensitivity tests:

With the concurrence of the representatives present, 20mm T39E3 tetryl loaded projectiles with T195E11 fuzes were fired with propellant charges determined to give service velocity for the gun used and minimum velocity, using a high twist (1/13.5 calibers) barrel, which would produce a spin greater than the 75,000 r.p.m. required to arm the fuze. The service charges gave striking velocities of 3207 ± 50 ft/sec at 160 feet from the particular gun used. The reduced charges fired from the high twist barrel gave striking velocities of 1655 ± 92 ft/sec and produced spin rates high enough to arm the fuze. Rounds were fired against targets as listed in paragraph 8c. at various obliquities. Twenty-two (22) of the above rounds at service velocity were fired through a hard rain. Detailed conditions of test are given in Appendix (B).

b. Arming Distance Tests:

Rounds including the T39E3 tetryl loaded projectile and the T195E11 fuze were fired with service propellant charges against 0".125 mild steel placed at 20 feet to 40 feet from the muzzle and against 0".375 24S-T4 aluminum alloy placed 15 feet from the muzzle. The details of test are given in Appendix (B).

10. RESULTS AND DISCUSSION:

a. Results of all tests are given in detail in Appendix (B) and summarized in Appendix (A), Tables I and II.

b. Functioning and Sensitivity Tests:

(1) The results obtained in these tests are summarized in Appendix (A), Table I.

(2) The functioning performance of the T195E11 fuze at reduced velocities of 1564 to 1747 ft. per second was satisfactory against the following:

(a) All targets tested at 0° obliquity with the exception of 0".012 clad 24S-T3 aluminum alloy.

(b) 0".020 24S-T3 aluminum alloy at obliquities of 0°, 60°, 70°, and 80°.

(c) 0".125 24S-T3 aluminum alloy at obliquities of 30° and 40°.

The functioning performance, however, was unreliable against 0".125 24S-T3 aluminum alloy at 50° (10%) and 60° (10%) and against 0".375 24S-T4 aluminum alloy at 50° (80%), 60° (50%), 70° (80%), and 80° (0%).

(3) The minimum thickness of aluminum alloy on which the T195E11 fuze would detonate consistently at 0° obliquity with striking velocities of 1564 to 1747 ft/sec was between 0".012 alclad (where no fuze action was obtained) and 0".020 24S-T3 aluminum alloy (where 100% functioning was obtained).

(4) The functioning performance of the T195E11 fuze with striking velocities of 3158 to 3257 ft. per second was as follows:

(a) Satisfactory against 0".012 clad 24S-T3 aluminum alloy, 0".020 24S-T3 aluminum alloy, 0".125 24S-T3 aluminum alloy, 0".375 24S-T4 aluminum alloy and 0".190 beaverboard at 0° obliquity.

(b) No fuze action against 0".072, 0".081 and 0".102 24S-T3 aluminum alloy at 0° obliquity.

(c) 100% against 0".375 24S-T4 aluminum alloy at 45° obliquity, 80% at 50°, and 0% at 60° and 70° obliquity.

(d) 100% against 0".020 24S-T3 aluminum alloy at 60°, 70°, and 80° obliquity.

(e) 100% against 0".125 24S-T3 aluminum alloy at 60°, 70°, 75° obliquity, and 47% at 80° obliquity.

(f) 100% against 0".125 mild steel at 60° obliquity and 80% at 70° and 80° obliquity.

(5) One (1) round of T39E3 projectile with a dummy fuze was fired with service propellant charge against 0".375 24S-T4 aluminum alloy at 70° obliquity to check the results obtained with the fuzed projectiles under these conditions. The appearance of the impact confirmed the fact that no fuze action had been obtained on the fuzed rounds.

(6) The T195E11 fuze did not function at high striking velocities against intermediate thicknesses (0".072 to 0".102) of 24S-T3 aluminum alloy at 0° obliquity. In view of the fact that functioning occurred against thinner and thicker targets, it is believed that such a combination of target, obliquity, and velocity was squeezing the fuze body against the firing pin in such a manner as to prevent fuze action. Targets placed behind such a combination demonstrated that the fuze was still capable of functioning.

c. Arming Distance Tests:

(1) Results for the arming distance tests are given in detail in Appendix (B) and are summarized in Table II, Appendix (A).

(2) The T195E11 fuze is not armed at a distance of 15 feet from the muzzle and does not function consistently until 30 to 40 feet from the muzzle. The 90% functioning obtained at 40 feet indicates that the distance required for 100% arming of the T195E11 fuze is greater than 40 feet.

(3) Three (3) rounds were fired at reduced velocities of 1626 to 1674 ft/sec versus a target of 0".125 24S-T3 aluminum alloy using a standard twist (1/25 calibers) barrel. No fuze action was exhibited by these three (3) rounds because the standard twist barrel did not produce the spin necessary to arm the fuze.

PART D

CONCLUSIONS

11. It is concluded that the point detonating fuze T195E11 as assembled in the T39E3 tetryl loaded projectile:

a. Was not armed at 15 feet from the gun muzzle, but was armed 90% of the time at 35 to 40 feet from the muzzle when fired with a muzzle velocity of 3300 ft/sec from a 1/25 caliber twist barrel.

b. Functioned satisfactorily with low and high striking velocities (1650 and 3200 ft/sec) against 0".020 24S-T3 aluminum alloy at obliquities of 0° to 80°, and against all thicker targets employed at obliquities of 0° to 45° with the exception of the range of thicknesses from 0".072 to 0".102 24S-T3 aluminum alloy at 0° obliquity, where no fuze action occurred at high striking velocities (3200 ft/sec).

c. Functioned reliably against 0".125 24S-T3 aluminum alloy at obliquities between 60° and 75° at high striking velocities (3200 ft/sec).

d. Functioned 80% or better against 0".125 mild steel at obliquities between 60° and 80° at high striking velocities.

e. Functioned unreliably against 0".125 24S-T3 aluminum alloy at 80° obliquity at high striking velocities and at obliquities of 50° and 60° at low striking velocities.

f. In general, functioned unreliably against 0".375 24S-T4 aluminum alloy at obliquities between 60° and 80° at low and high striking velocities.

g. Had a minimum sensitivity thickness in 24S-T3 aluminum alloy of 0".020 or less for all obliquities up to and including 80° at low and high striking velocities.

h. Exhibited a slightly delayed fuze action when fired against thin targets.

i. Gave no bore or flight premature detonations when fired as single rounds from the accuracy type barrels.

j. Showed no fuze action when fired at high striking velocities against 0.020 blotter paper at 0° obliquity or through a heavy rain.

k. Exhibited an overall functioning performance not appreciably different from the 20mm Mk 78 Mod 0 fuze with the exception that the subject T195E11 fuze showed no fuze action at high striking velocities against intermediate thicknesses (0.072 to 0.102) of 24S-T3 aluminum alloy at 0° obliquity.

Tests of Point Detonating Fuze T195E11 for 20mm Ammunition

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CONFIDENTIAL

NPG REPORT NO. 1115

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

Thirteenth Partial Report

on

Research, Development and Tests of

High Performance Aircraft Machine Gun Fuzes

- -

Final Report

on

Tests of Point Detonating Fuze T195E11

for 20mm Ammunition

Project No.: NPG-Re2b-327-1-53
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Tests of Point Detonating Fuse T195E11 for 20mm Ammunition

TABLE I

SUMMARY OF FUNCTIONING TEST RESULTS

Target	Obliquity	STRIKING VELOCITY FT/SEC 1564-1747 Rds. Fired	1564-1747 % HO	3158-3257 Rds. Fired	3158-3257 % HO
0".020 Blotter Paper	0°			3	0
0".012 Alclad, 24S-T3 aluminum alloy	0°	5	0	10	100
0".020 24S-T3 aluminum alloy	0°	10	100	10	100
0".040 24S-T3 " "	0°	5	100		
0".072 24S-T3 " "	0°	5	100	5	0
2 Sheets 0".040 24S-T3 aluminum alloy	0°			3	100
0".081 24S-T3 aluminum alloy	0°			5	0
0".102 24S-T3 " "	0°	5	100	6	0
0".125 24S-T3 " "	0°	10	100	12	100
0".190 Beaverboard	0°			5	100
0".250 24S-T4 aluminum alloy	0°	5	100		
0".375 24S-T4 " "	0°			10	100
0".500 24S-T4 " "	0°	5	100		
0".125 24S-T3 " "	30°	5	100		
0".125 24S-T3 " "	40°	10	100		
0".375 24S-T4 " "	45°			5	100
0".125 24S-T3 " "	50°	10	10		
0".375 24S-T4 " "	50°	10	80	5	80
0".020 24S-T3 " "	60°	10	100	10	100
0".125 24S-T3 " "	60°	10	10	10	100
0".125 Mild Steel	60°			5	100
0".375 24S-T4 aluminum alloy	60°	10	50	10	0
0".020 24S-T3 " "	70°	10	100	10	100
0".125 24S-T3 " "	70°			10	100
0".125 Mild Steel	70°			5	80
0".375 24S-T4 aluminum alloy	70°	10	80	5	0
0".125 24S-T3 " "	75°			10	100
0".020 24S-T3 " "	80°	10	100	10	100
0".125 24S-T3 " "	80°			15	47
0".125 Mild Steel	80°			5	80
0".375 24S-T4 aluminum alloy	80°	5	0		

TABLE II

SUMMARY OF ARMING TEST RESULTS

Target	Striking Velocity	Distance From Gun Muzzle													
		15'		20'		25'		30'		35'		40'		150'	
		Rds. Fired	% HO	Rds. Fired	% HO	Rds. Fired	% HO	Rds. Fired	% HO	Rds. Fired	% HO	Rds. Fired	% HO	Rds. Fired	% HO
0".125 Mild Steel	EST. 3250 ft/sec			10	10	10	80	10	80	10	90	10	90		
0".125 24S-T3 aluminum alloy	1650 ± 24 ft/sec													3	0
0".375 24S-T4 aluminum alloy	EST. 3250 ft/sec	5	0												

All rounds were fired from Accuracy Barrel FAD-1, 1/25 Caliber Twist.

Tests of Point Detonating Fuze T195E11 for 20mm Ammunition

EXPLANATION OF SYMBOLS USED IN TESTS

A.A. - Aluminum Alloy

HO - High Order Detonation

NFA - No Fuze Action

HB - Large Bulge on Target

SB - Small Bulge on Target

FUZE FIRING RECORD

Gun: 20mm, FAD-1, Mann Accuracy Barrel
Range: 1,160 feet
Fuze: T195E11
Projectile: T39E3 Tetryl Loaded, Lot PA-E-5992
Remarks: Used 608 grains of IMR 5010 Powder for Rds. 1 to 230.

Date: 20 June 1952
Mfr.: Majestic Manufacturing Company
Loaded by Picatinny Arsenal

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
1	1	3196	0°	0".020 24S-T3 A.A., Blotter Paper 12" Behind	HO	Behind Plate
2	2	3210	"	" " " " " " "	HO	" "
3	3	3196	"	" " " " " " 7 1/2" Behind	HO	7 1/2" Behind Plate
4	4	3203	"	" " " " " " 3" and 10" Behind	HO	3" Behind Plate
5	5	3176	"	" " " " " " 3" and 6" "	HO	3" " "
6	6	3192	"	" " " " " " 3" and 6" "	HO	3" " "
7	7	3206	"	" " " " " " 3" and 6" "	HO	3" " "
8	8	3192	"	" " " " " " 3" and 6" "	HO	3" " "
9	9	3210	"	" " " " " " 3" Behind	HO	3" " "
10	10	3203	"	" " " " " " 3" and 6" Behind	HO	3" " "
11	11	3203	"	0".012 Alclad; Blotter Paper 3" and 9 1/2" Behind	HO	9 1/2" Behind Plate
12	12	3235	"	" " " " " 3" and 9 1/2" "	HO	9 1/2" " "
13	13	3196	"	" " " " " 6" and 9 1/2" "	HO	9 1/2" " "
14	14	3189	"	" " " " " 6" and 9 1/2" "	HO	Beyond 9 1/2"
15	15	3214	"	" " " " " 8" and 12" Behind	HO	Between 8" and 12"
16	16	3183	"	" " " " " 9" and 12" "	HO	9" Behind Plate
17	17	3203	"	" " " " " 9" and 12" "	HO	10"-12" Behind Plate
18	18	3206	"	" " " " " 9" and 12" "	HO	9" Behind Plate
19	19	3179	"	" " " " " 9" and 12" "	HO	8"-9" Behind Plate
20	20	3189	"	" " " " " 9" and 12" "	HO	8"-9" " "
21	21	3192	"	0".190 Beaverboard, Blotter Paper 9" and 12" Behind	HO	6"-9" " "
22	22	3199	"	" " " " " 3" and 8" "	HO	3" Behind

FUZE FIRING RECORD (Continued)

Date: 20 June 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target		Fuze Action	Remarks
23	23	3189	0°	0".190 Beaverboard;	Blotter Paper 3" and 8" Behind	HO	3" Behind Plate
24	24	3189	"	" "	" " 3" and 8" "	HO	3" " "
25	25	3206	"	" "	" " 3" and 8" "	HO	3" " "
26	26	3185	"	0".072 24S-T3 A.A.;	" " 3" and 8" "	NFA	3/4" Hole in Plate and Blotter Paper
27	27	3206	"	" " "	" " 3" and 8" "	NFA	3/4" " " " " " "
28	28	3203	"	" " "	" " 3" and 8" "	NFA	3/4" " " " " " "
29	29	3196	"	" " "	" " 3" and 8" "	NFA	3/4" " " " " " "
30	30	3218	"	" " "	" " 3" and 8" "	NFA	3/4" " " " " " "
31	31	3185	"	0".125 24S-T3 A.A.;	" " 3" and 8" "	HO	2" x 2" Hole
32	32	3196	"	" " "	" " 3" and 8" "	HO	2" x 2" "
33	33	3199	"	" " "	" " 3" and 8" "	HO	2 1/4" x 2 1/4" Hole
34	34	3231	"	" " "	" " 3" and 8" "	HO	2" x 2" Hole
35	35	3196	"	" " "	" " 3" and 8" "	HO	2 1/4" x 2 1/4" Hole
36	36	3203	"	0".081 24S-T3 A.A.;	" " 3" and 8" "	NFA	3/4" Hole
37	37	3206	"	" " "	" " 3" and 8" "	NFA	3/4" Hole
38	38	3185	"	" " "	" " 3" and 8" "	NFA	3/4" Hole
39	39	3203	"	" " "	" " 3" and 8" "	NFA	3/4" Hole
40	40	3183	"	" " "	" " 3" and 8" "	NFA	3/4" Hole
Date: 21 June 1952							
41	41	3176	0°	0".102 24S-T3 A.A.;	Blotter Paper 3" and 8" Behind	NFA	3/4" Hole
42	42	3176	"	" " "	" " 3" and 8" "	NFA	3/4" Hole
43	43	3206	"	" " "	" " 3" and 8" "	NFA	3/4" Hole, Fired Thru Hard Rain
44	44	3183	"	" " "	" " 3" and 8" "	NFA	3/4" Hole, " " " "
45	45	3176	"	" " "	" " 3" and 8" "	NFA	3/4" Hole, " " " "
46	46	3179	"	" " "	" " 3" and 8" "	NFA	3/4" Hole, " " " "

FUZE FIRING RECORD (Continued)

Date: 21 June 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
47	47	3179	0°	0".125 24S-T3 A.A.; Blotter Paper 3" and 8" Behind	HO	2" x 2" Hole, Fired Thru Hard Rain
48	48	3189	"	" " "	HO	2 1/2" x 2 1/2" Hole, Fired Thru Hard Rain
49	49	3179	"	" " "	Disregard,	Went Thru Old Hole, Fired Thru Hard Rain
50	50	3169	"	" " "	"	" " " " " " " "
51	51	3172	"	" " " Blotter Paper 3" and 8" Behind	HO	2 1/2" Hole
52	52	3179	"	" " " " " 3" and 8" "	HO	2" Hole
53	53	3185	"	" " " " " 3" and 8" "	HO	2" "
54	54	3192	"	" " "	HO	2" " , Fired Thru Hard Rain
55	55	3179	"	" " "	HO	2" " , " " " "
56	56	3192	"	" "	Disregard,	Went Thru Old Hole, Fired Thru Hard Rain
57	57	3179	"	0".375 24S-T4 A.A.; Blotter Paper 3" and 8" Behind	HO	3 1/2" Hole
58	58	3183	"	" " " "	HO	3" Hole
59	59	3185	"	" " " "	Disregard,	Went Thru Old Hole
60	60	3169	"	" " " "	HO	3" Hole
61	61	3169	"	" " " "	HO	3" Hole, Fired Thru Hard Rain
62	62	3172	"	" " " "	HO	3 1/4" Hole, Fired Thru Hard Rain
63	63	3169	"	" " " "	HO	3" Hole, Fired Thru Hard Rain
64	64	3185	"	" " " "	HO	3" " " " " "
65	65	3189	"	" " " "	HO	3" " " " " "
66	66	3192	"	" " " "	HO	3" " " " " "
67	67	3186	"	" " " "	HO	3 1/4" Hole, Fired Thru Hard Rain
68	68	3199	60°	0".020 24S-T3 A.A.	HO	3" x 7" Hole

FUZE FIRING RECORD (Continued)

Date: 21 June 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
69	69	3192	60°	0".020 24S-T3 A.A.	HO	3" x 8" Hole
70	70	3189	"	" " "	HO	5" x 6" Hole
71	71	3172	"	" " "	HO	2 1/2" x 5" Hole
72	72	3176	"	" " "	HO	1 1/2" x 5" Hole
73	73	3172	"	" " "	HO	6 x 1/2" Hole
74	74	3169	"	" " "	HO	3" x 4" Hole
75	75	3179	"	" " " ; Blotter Paper 3" Behind	HO	2 1/2" x 6" Hole
76	76	3172	"	" " "	HO	3" x 9" Hole
77	77	3179	"	" " "	HO	4" x 8" Hole
78	78	3162	70°	" " "	HO	4" x 3 1/2" Hole, Fired Thru Hard Rain
79	79	3162	"	" " "	HO	4" x 4" Hole, Fired Thru Hard Rain
80	80	3162	"	" " "	HO	4" x 3 1/2" Hole, Fired Thru Hard Rain
81	81	3183	"	" " "	HO	5" x 4" Hole, Fired Thru Hard Rain
82	82	3183	"	" " "	HO	5" x 4" Hole, " " " "
83	83	3179	"	" " "	HO	5 1/2" x 2 1/2" Hole, Fired Thru Hard Rain
84	84	3185	"	" " "	HO	9 1/2" x 10" Hole
85	85	3189	"	" " "	HO	4" x 5" Hole
86	86	3172	"	" " "	HO	5" x 5" Hole
87	87	3176	"	" " "	HO	4" x 3" Hole, Fired Thru Hard Rain
88	88	3189	80°	" " "	HO	4" x 4" Hole
89	89	3210	"	" " "	HO	5" x 4" Hole
90	90	3192	"	" " "	HO	4" x 3" Hole
91	91	3189	"	" " "	HO	3 1/2" x 4" Hole
92	92	3185	"	" " "	HO	4" x 3" Hole
93	93	3169	"	" " "	HO	5" x 11" Hole
94	94	3185	"	" " "	HO	6" x 5" Hole
95	95	3179	"	" " "	HO	4" x 5" Hole
96	96	3183	"	" " "	HO	4" x 4" Hole

FUZE FIRING RECORD (Continued)

Date: 21 June 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
97	97	3189	80°	0".020 24S-T3 A.A.	HO	4" x 4" Hole
98	98	3172	"	0".125 24S-T3 A.A.	NFA	1" x 4 1/2" Hole
99	99	3183	"	" "	NFA	1 1/2" x 4" Hole
100	100	3176	"	" " Beaverboard Behind Target	NFA	1" x 4" Hole
101	101	3176	"	" " " " "	Disregard, Hit Plate Frame	
102	102	3165	"	" " " " "	Disregard, Hit Previous Impact	
103	103	3179	"	" " " " "	NFA	1" x 4" Hole
104	104	3183	"	" " " " "	NFA	1" x 4" Hole
105	105	3189	60°	" " " " "	HO	2 1/2" Hole
106	106	3169	"	" " " " "	HO	3" Hole
107	107	3199	"	" "	HO	3" x 3 1/2" Hole
108	108	3199	"	" "	HO	3" x 3 1/2" Hole
109	109	3176	"	" "	HO	3" Hole
110	110	3185	"	" "	HO	4" Hole
111	111	3183	"	" "	HO	2 1/2" x 3" Hole
112	112	3196	"	" "	HO	2 1/2" x 3" Hole
113	113	3196	"	" "	HO	3" Hole
114	114	3183	"	" "	HO	2 1/2" x 3" Hole
115	115	3183	70°	" " Beaverboard Behind Target	HO	2 1/2" Hole
116	116	3169	"	" " " " "	HO	2 1/2" Hole
117	117	3176	"	" " " " "	HO	2 1/2" Hole
118	118	3179	"	" "	HO	2 1/2" Hole
119	119	3189	"	" "	HO	2 1/2" x 3" Hole
120	120	3176	"	" "	HO	2 1/2" Hole
121	121	3228	"	" "	HO	2 1/2" Hole
122	122	3199	"	" "	HO	3" Hole
123	123	3183	"	" "	HO	3" Hole

FUZE FIRING RECORD (Continued)

Date: 21 June 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
124	124	3192	70°	0".125 24S-T3 A.A.	HO	3" Hole
125	125	Miss	"	0".375 24S-T4 A.A.; Beaverboard Behind Target	NFA	1 1/2" x 2 1/2" Hole
126	126	3216	"	" " " " " "	NFA	1" x 2" Hole
127	127	3172	"	Dummy Fuze, 0".375 24S-T4 A.A.; Beaverboard Behind Target		1" x 2" Hole
128	128	3176	"	0".375 24S-T4 A.A.; Beaverboard Behind Target	NFA	1" x 2" Hole
129	129	3179	"	" " " " " "	NFA	1" x 2" Hole
130	130	3172	"	" " " " " "	NFA	1 1/4" x 2" Hole
131	131	3196	60°	0".375 24S-T4 A.A.; Beaverboard Behind Target	NFA	1" x 2 1/2" Hole
132	132	3183	"	" " " " " "	NFA	1" x 2" Hole
133	133	3199	"	" " " "	NFA	1" x 2" Hole
134	134	3172	"	" " " "	NFA	1 1/4" x 2" Hole
135	135	3192	"	" " " "	NFA	1" x 2"
136	136	3199	"	" " " "	NFA	1" x 2 1/4" Hole
137	137	3169	"	" " " "	NFA	1" x 2" Hole
138	151	3199	"	" " " "	NFA	2" x 1" Hole
139	139	3221	"	" " " "	NFA	2" x 1" Hole
140	140	3196	"	" " " "	NFA	2" x 1" Hole
141	141	3179	45°	" " " Beaverboard Behind Target	HO	2 1/2" x 3" Hole
142	142	3185	"	" " " " " "	HO	3" x 6" Hole, Hit Prev. Impact
143	143	3206	"	" " " " " "	HO	3" x 3 1/2" Hole
144	144	3196	"	" " " "	HO	2" x 3" Hole
145	145	3189	"	" " " "	HO	2" x 3" Hole
146	146	3192	60°	0".125 Mild Steel; Beaverboard Behind Target	HO	3" x 3" Hole
147	147	3176	"	" " " " " "	HO	3" x 4" Hole
148	148	3165	"	" " " " " "	HO	3" x 3 3/4" Hole
149	149	3183	"	" " " "	HO	2 1/2" x 3 1/2" Hole
150	150	3189	"	" " " "	HO	3" x 4" Hole

FUZE FIRING RECORD (Continued)

Date: 21 June 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
151	138	3206	75°	0".125 24S-T3 A.A.; Beaverboard Behind		Missed Plate
152	152	3176	"	" " " " " "	HO	3" x 3" Hole
153	153	3210	"	" " " "	HO	3" x 2" Hole
154	154	3185	"	" " " "	HO	2 1/2" x 2 1/2" Hole
155	155	3185	"	" " " "	HO	3" x 3" Hole
156	156	3183	"	" " " "	HO	2 1/2" x 3" Hole
157	157	3183	"	" " " "	HO	3" x 2 1/2" Hole
158	158	3196	"	" " " "	HO	3" x 2 1/2" Hole
159	159	3189	"	" " " "	HO	3 1/2" x 2" Hole
160	160	3183	"	" " " "	HO	2 1/2" x 2 1/2" Hole
161	161	3176	"	" " " "	HO	2 1/2" x 3" Hole

Date: 26 June 1952

ARMING TEST

162	162	0°	0".125	Mild	Steel	at	20	feet	Beaverbaord	9"	Behind	NFA	
163	163	"	"	"	"	"	"	"	"	"	"	NFA	
164	164	"	"	"	"	"	"	"	"	"	"	NFA	
165	165	"	"	"	"	"	"	"	"	"	"	NFA	
166	166	"	"	"	"	"	"	"	"	"	"	NFA	
167	167	"	0".125	Mild	Steel	at	30	feet				HO	3" Hole
168	168	"	"	"	"	"	"	"				NFA	3/4" Hole
169	169	"	"	"	"	"	"	"				HO	3" Hole
170	170	"	"	"	"	"	"	"				NFA	3/4" Hole
171	171	"	"	"	"	"	"	"				HO	3" Hole
172	172	"	"	"	"	"	"	"				HO	3" Hole
173	173	"	"	"	"	"	"	"				HO	2 3/4" Hole

FUZE FIRING RECORD (Continued)

Date: 26 June 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
174	174		0°	0".125 Mild Steel at 30 feet	HO	2 3/4" Hole
175	175		"	" " " " " "	HO	3" Hole
176	176		"	" " " " " "	HO	2 3/4" Hole
177	177		"	0".125 Mild Steel at 35 feet	HO	3" Hole
178	178		"	" " " " " "	NFA	3/4" Hole
179	179		"	" " " " " "	HO	3" Hole
180	180		"	" " " " " "	HO	2 3/4" Hole
181	181		"	" " " " " "	HO	3" Hole
182	182		"	" " " " " "	HO	3" Hole
183	183		"	" " " " " "	HO	3" Hole
184	184		"	" " " " " "	HO	3" Hole
185	185		"	" " " " " "	HO	2 3/4" Hole
186	186		"	" " " " " "	HO	2 3/4" Hole
187	187		"	0".125 Mild Steel at 20 feet	NFA	3/4" Hole
188	188		"	" " " " " "	NFA	3/4" Hole
189	189		"	" " " " " "	HO	3" Hole
190	190		"	" " " " " "	NFA	3/4" Hole
191	191		"	" " " " " "	NFA	3/4" Hole
192	192		"	0".375 24S-T4 A.A. at 15 feet, Beaverboard 9" behind and at sides	NFA	3/4" Hole
193	193		"	" " " " " " " " " " " "	NFA	3/4" Hole
194	194		"	" " " " " " " " " " " "	NFA	3/4" Hole
195	195		"	" " " " " " " " " " " "	NFA	3/4" Hole
196	196		"	" " "	NFA	3/4" Hole
197	197		"	0".125 Mild Steel at 25 feet	NFA	3/4" Hole
198	198		"	" " " " " "	NFA	3/4" Hole
199	199		"	" " " " " "	NFA	3/4" Hole
200	200		"	" " " " " "	NFA	3/4" Hole

FUZE FIRING RECORD (Continued)

Date: 26 June 1952
Fuze T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
201	201		0°	0".125 Mild Steel at 25 feet	HO	2 3/4" Hole
202	202		"	" " " " " "	HO	2 3/4" Hole
203	203		"	" " " " " "	NFA	3/4" Hole
204	204		"	" " " " " "	NFA	3/4" Hole
205	205		"	" " " " " "	HO	2 3/4" Hole
206	206		"	" " " " " "	HO	2 3/4" Hole
207	207		"	0".125 Mild Steel at 40 feet	HO	3" Hole
208	208		"	" " " " " "	HO	3" Hole
209	209		"	" " " " " "	NFA	3/4" Hole
210	210		"	" " " " " "	HO	3" Hole
211	211		"	" " " " " "	HO	3" Hole
212	212		"	" " " " " "	HO	3" Hole
213	213		"	" " " " " "	HO	3" Hole
214	214		"	" " " " " "	Disregard, Missed Target	
215	215		"	" " " " " "	HO	3" Hole
216	216		"	" " " " " "	HO	3" Hole
217	217		"	" " " " " "	HO	3" Hole
218	218	3224	50°	0".375 24S-T4 A.A.	NFA	1 1/4" x 3/4" Hole
219	219	3224	"	" " "	HO	3" x 2 1/2" Hole
220	220	3235	"	" " "	HO	3 1/2" x 2" Hole
221	221	3217	"	" " "	HO	3 1/2" x 2" Hole
222	222	3214	"	" " "	HO	3 1/2" x 2" Hole

FUZE FIRING RECORD (Continued)

Date: 27 June 1952
Fuze: T195E11

Gun: EX 154 from Rds. 231-382 1/13.5 twist
Remarks: Rds. 231-382 used 245 grains of IMR 5010 Powder

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
223	223	3192	80°	0".125 24S-T3 A.A.	HO	2 1/2" x 3" Hole
224	224	3179	"	" " "	NFA	1" x 5" Hole
225	225	3199	"	" " "	NFA	1" x 4" Hole
226	226	3214	"	" " "	NFA	1" x 4" Hole
227	227	3206	"	" " "	HO	3 1/2" x 2 1/2" Hole

Date: 10 July 1952

Rd. No.	Fuze No.	Mean Velocity	Obl.	Target	Fuze Action	Remarks
228	228	Miss	0°	2 Sheets 0".040 24S-T3 A.A.; Blotter Paper 6" in Front, 6" and 12" Behind	HO	2nd Sheet 0".040 2" Hole
229	229	3196	"	" " " " " " " " " " " " " "	HO	1 3/4" Hole-Went on 2nd Sheet
230	230	3192	"	" " " " " " " " " " " " " "	HO	1 3/4" Hole-Went on 2nd Sheet

Date: 8 August 1952

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
231	251	1705	0°	0".125 24S-T3 A.A.	HO	10" x 15" Hole
232	252	1679	"	" " " Light Rain	HO	14" x 14" Hole
233	253	1648	"	" " " " "	HO	10" x 15" Hole
234	254	1747	"	" " " " "	HO	10" x 15" Hole
235	255	1668	"	" " " " "	HO	12" x 14" Hole
236	256	1707	"	" " " " "	HO	11" x 13" Hole
237	257	1745	"	" " " " "	HO	10" x 16" Hole
238	258	1664	"	" " " " "	HO	12" x 18" Hole
239	259	1700	"	" " " " "	HO	11" x 16" Hole
240	260	1658	"	" " " " "	HO	10" x 16" Hole

FUZE FIRING RECORD (Continued)

Date: 8 August 1952
Fuze: T195E11
Gun: EX 154

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
241	261	1742	0°	0".020 24S-T3 A.A.; Blotter Paper 10" Behind, 0".125 A.A. 5 feet Behind	HO	0" to 10" Delay Behind Target
242	262	1645	"	" " " " " " " " " " " " "	HO	0" to 10" " " "
243	263	1726	"	" " " Blotter Paper 6" and 10" Behind	HO	0" to 6" " " "
244	264	1669	"	" " " " " 3" and 10" "	HO	3" to 10" " " "
245	265	1670	"	" " " " " 4" and 7" "	HO	3" to 4" " " "
246	266	1721	"	" " " " " 4" and 7" "	HO	3" to 4" " " "
247	267	1728	"	" " " " " 4" and 7" "	HO	3" to 4" " " "
248	268	1711	"	" " " " " 4" Behind	HO	3" to 4" " " "
249	269	1654	"	" " " " " 4" "	HO	3" to 4" " " "
250	270	1692	"	" " " " " 4" "	HO	3" to 4" " " "
251	271	1653	"	0".040 24S-T3 A.A.; Blotter Paper 6" Behind, 0".125 A.A. 5 feet Behind	HO	3" x 3" Hole
252	272	1616	"	" " " " " " " " " " " " "	HO	3 1/2" x 4 1/2" Hole
253	273	1731	"	" " " " " " " " " " " " "	HO	3" x 3" Hole
254	274	1626	"	" " " " " " " " " " " " "		Missed Target
255	275	1670	"	" " " " " " " " " " " " "	HO	3" x 3 1/2" Hole
256	276	1709	"	" " " " " " " " " " " " "	HO	3 1/2" x 3 1/2" Hole
257	277	1656	"	0".072 24S-T3 A.A.	HO	9" x 9" Hole
258	278	1687	"	" " " "	HO	7 1/2" x 7 1/2" Hole
259	279	1598	"	" " " "	HO	9" x 10" Hole
260	280	1663	"	" " " "	HO	8" x 10" Hole
261	281	1672	"	" " " "	HO	8" x 10" Hole
262	282	1669	"	0".102 24S-T3 A.A.	HO	10" x 12" Hole
263	283	1666	"	" " " "	HO	4" x 9" Hole
264	284	1641	"	" " " "	HO	11" x 15" Hole
265	285	1593	"	" " " "	HO	12" x 19" Hole

FUZE FIRING RECORD (Continued)

Date: 8 August 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
266	286	1671	0°	0".102 24S-T3 A.A.	HO	9" x 10" Hole
267	287	1694	0°	0".250 24S-T4 A.A.	HO	4" x 7" Hole
268	288	1596	"	" " "	HO	4" x 5" Hole
269	289	1630	"	" " "	HO	4" x 6" Hole
270	290	1677	"	" " "	HO	6" x 4 1/2" Hole
271	291	1677	"	" " "	HO	4" x 4" Hole
272	292	1656	"	0".500 24S-T4 A.A.	HO	HB
273	293	1694	"	" " "	HO	HB
274	294	1654	"	" " "	HO	HB
275	295	1617	"	" " "	HO	HB
276	296	1607	"	" " "	HO	HB
277	297	1689	0°	0".012 Alclad-Blotter Paper 10" Behind, 0".125 A.A. 5 feet Behind	NFA	HO on 0".125-4" x 6" Hole
278	298	1645	"	" " " " " " " " " " "	NFA	HO on 0".125-4" x 7" Hole
279	299	1589	"	" " " " " " " " " " "	NFA	HO on 0".125-5" x 8" Hole
280	300	1698	"	" " " " " " " " " " "	NFA	HO on 0".125-6" x 10" Hole
281	301	1634	"	" " " " " " " " " " "	NFA	HO on 0".125-6" x 7" Hole
282	302	1585	60°	0".020 24S-T3 A.A.	HO	5" x 7" Hole, Slight Delay
283	303	1611	"	" " "	HO	9" x 8" Hole
284	304	1661	"	" " "	HO	7" x 10" Hole
285	305	1619	"	" " "	HO	9" x 10" Hole
286	306	1665	"	" " "	HO	7" x 10" Hole
287	307	1671	"	" " "	HO	7" x 9" Hole
288	308	1670	"	" " "	HO	6" x 10" Hole
289	309	1639	"	" " "	HO	8" x 8" Hole
290	310	1646	"	" " "	HO	8" x 6" Hole
291	311	1592	"	" " "	HO	5" x 6" Hole
292	312	1660	60°	0".125 24S-T3 A.A.	NFA	1" x 1" Hole
293	313	1636	"	" " "	NFA	1" x 1 1/2" Hole

FUZE FIRING RECORD (Continued)

Date: 8 August 1952
Fuzes: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
294	314	1671	60°	0".125 24S-T3 A.A.	NFA	1" x 2" Hole
295	315	1629	"	" " " 0".040 5 Feet Behind	NFA	1" x 1" Hole
296	316	1639	60°	0".125 24S-T3 A.A.; Beaverboard 6" Behind	NFA	1" x 2" Hole
297	317	1675	"	" " " " " "	NFA	1" x 2 1/2" Hole
298	318	1582	"	" " " " " "	NFA	1" x 1 1/2" Hole
299	319	1740	"	" " " " " "	NFA	1" x 1 1/2" Hole
300	320	1672	"	" " " 0".125 A.A. 5 feet Behind - at Normal	NFA	1" x 2" Hole
301	321	1711	"	" " " " " " " "	HO	3" x 3 1/2" Hole
Date: 11 August 1952						
302	322	1651	50°	0".125 24S-T3 A.A.; 0".125 Mild Steel 5 feet Behind, Normal	NFA	1 3/4" x 1" Hole
303	323	1589	"	" " " " " " " " "	NFA	1" x 1 1/2" Hole, HO on Steel Plate 10" Hole
304	324	1633	"	" " " " " " " " "	NFA	1" x 1 1/2" Hole, HO on Steel Plate 13" Hole
305	325	1646	"	" " " 0".500 24S-T4 A.A. 5 feet Behind, Normal	NFA	1" x 2" Hole, NFA on Back Plate
306	326	1575	"	" " " " " " " "	NFA	1" x 1 1/2" Hole, NFA on Back Plate
307	327	1711	"	0".375 24S-T4 A.A.; Beaverboard 3 feet Behind	HO	HB, 5" Crack, 1/4" Open
308	328	1635	"	" " " " " " "	HO	HB, 6" Crack, 1/4" Open
309	329	1597	"	" " " " " " "	NFA	2 1/2" x 3" Hole
310	330	1646	"	" " " " " " "	HO	HB, 6" Crack, 1/4" Open
311	331	1641	"	" " " " " " "	HO	2" Section Knocked Out
312	332	1608	"	" " " " " " "	HO	HB
313	333	1710	"	" " " " " " "	NFA	2 1/2" x 4" Section Knocked Out

FUZE FIRING RECORD (Continued)

Date: 11 August 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Fuze Action	Remarks
314	334	1637	50°	0".375 24S-T4 A.A.; Beaverboard 3 feet Behind	HO	2" x 4" Tongue Open
315	335	1564	"	" " " " " " "	HO	HB
316	336	1609	"	" " " " " " "	HO	HB, 6" Crack
317	337	1643	60°	0".375 24S-T4 A.A.; Beaverboard 3 feet Behind	NFA	1" x 4" Hole
318	338	1628	"	" " " " " " "	HO	HB, 3" Crack
319	339	1690	"	" " " " " " "	HO	1 1/2" x 1" Hole
320	340	1713	"	" " " " " " "	Miss - Hit Old Impact	
321	341	1694	"	" " " " " " "	NFA	1" x 3" Hole
322	342	1630	"	" " " " " " "	HO	3/8" x 3" Tongue Open
323	343	1677	"	" " " " " " "	HO	1/2" x 1/2" Tongue Open
324	344	1681	"	" " " " " " "	HO	HB, 3" Crack
325	345	1641	"	" " " " " " "	NFA	1" x 2" Hole
326	346	1684	"	" " " " " " "	NFA	1" x 2" Hole
327	347	1687	"	" " " " " " "	NFA	1" x 2" Hole
328	348	1655	70°	0".375 24S-T4 A.A.; Beaverboard 3 feet Behind	NFA	1 1/4" Crack
329	349	1668	"	" " " " " " "	HO	HB
330	350	1677	"	" " " " " " "	HO	HB
331	351	1648	"	" " " " " " "	NFA	HB, 2" Crack
332	352	1711	"	" " " " " " "	HO	HB
333	353	1647	"	" " " " " " "	HO	HB
334	354	1665	"	" " " " " " "	HO	HB, 4" radial Cracks, 1/4" Thru Crack
335	355	1672	"	" " " " " " "	HO	HB
336	356	1649	"	" " " " " " "	HO	HB
337	357	1661	"	" " " " " " "	HO	1 1/2" Tongue Open

FUZE FIRING RECORD (Continued)

Date: 11 August 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Action	Remarks
338	358	1639	70°	0".020 24S-T3 A.A.	HO	4 1/2" Hole
339	359	1668	"	" " "	HO	5" x 8" Hole
340	360	1724	"	" " "	HO	5" x 9" Hole
341	361	1656	"	" " "	HO	5" x 6" Hole
342	362	1665	"	" " "	HO	10" x 4" Hole
343	363	1655	"	" " "	HO	6" x 9" Hole
344	364	1642	"	" " "	HO	6" x 5" Hole
345	365	1640	"	" " "	HO	9" x 5" Hole
346	366	1682	"	" " "	HO	7" x 6" Hole
347	367	1710	"	" " "	HO	7" x 6" Hole
348	368	1661	80°	0".020 24S-T3 A.A.	HO	4" x 3" Hole
349	369	1695	"	" " "	HO	4 1/2" x 4 1/2" Hole
350	370	1717	"	" " "	HO	4" x 5" Hole
351	371	1668	"	" " "	HO	4" x 5" Hole
352	372	1722	"	" " "	HO	6" x 6" Hole
353	373	1616	"	" " "	HO	6" x 7" Hole
354	374	1683	"	" " "	HO	4" x 6" Hole
355	375	1730	"	" " "	HO	5" x 5" Hole
356	376	1697	"	" " "	HO	4" x 6" Hole
357	377	1642	"	" " "	HO	5" x 5" Hole
358	378	1702	80°	0".375 24S-T4 A.A.; 0".125 Mild Steel, Normal, 5 feet Behind	NFA	S8
359	379	1601	"	" " " " " " " " " "	NFA	HO on 1/8" Plate, 10" x 10" Hole
360	380	1691	"	" " " " " " " " " "	NFA	HO on 1/8" Plate, 4" x 5" Hole
361	381	1633	"	" " " " " " " " " "	NFA	HO on 1/8" Plate, 9" x 6" Hole
362	382	1649	"	" " " " " " " " " "	NFA	HO on 1/8" Plate, 9" x 6" Hole

FUZE FIRING RECORD (Continued)

Date: 11 August 1952
Fuze: T195E11

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Action	Remarks
363	383	1641	30°	0".125 24S-T3 A.A.	HO	5" x 9" Hole
364	384	1640	"	" " "	HO	5" x 9" Hole
365	385	1689	"	" " "	HO	4 1/2" x 9" Hole
366	386	1685	"	" " "	HO	5" x 9" Hole
367	387	1667	"	" " "	HO	5" x 10" Hole
368	388	1616	40°	0".125 24S-T3 A.A.	HO	5" x 7" Hole
369	389	1650	"	" " "	HO	4 1/2" x 7" Hole
370	390	1699	"	" " "	HO	4" x 9" Hole
371	391	1654	"	" " "	HO	5" x 7" Hole
372	392	1677	"	" " "	HO	4" x 7" Hole
373	393	1669	"	" " "	HO	4" x 10" Hole
374	394	1675	"	" " "	HO	4" x 7" Hole
375	395	1621	"	" " "	HO	5" x 7" Hole
376	396	1690	"	" " "	HO	4" x 10" Hole
377	397	1669	"	" " "	HO	4" x 6" Hole
378	398	1690	50°	" " "	NFA	1" x 1 1/2" Hole
379	399	1607	"	" " " 1/8" plate-5 feet Behind	NFA	3/4" x 1 1/2" Hole
380	262	1697	"	" " " " " " " "	NFA	HO on Back Plate
381	640	1723	"	" " " " " " " "	NFA	HO on Back Plate
382	641	1737	"	" " " " " " " "	HO	3 1/2" x 7" Hole

FUZE FIRING RECORD (Continued)

Date: 3 October 1952
Fuze: T195E11
Gun: FAD-1-383-400
Remarks: Rds. 383-397 used 608 grains IMR 5010 Powder. Rds. 398-400 used 245 grains IMR 5010 Powder.

Rd. No.	Fuze No.	Striking Velocity	Obl.	Target	Action	Remarks
383	642	3185	70°	0".125 Mild Steel	HO	2" x 3" Hole
384	643	3185	"	" " "	NFA	1" x 2" Hole
385	644	3158	"	" " "	HO	3" x 4" Hole
386	645	3210	"	" " "	HO	3" x 4" Hole
387	646	3210	"	" " "	HO	3" x 4" Hole
388	647	3196	80°	" " "	HO	4" Hole
389	648	3206	"	" " "	HO	4" Hole
390	649	3199	"	" " "	HO	3" x 3 1/2" Hole
391	650	3235	"	" " "	HO	3 1/2" Hole
392	651	3214	"	" " "	NFA	1" x 2 1/4" Hole
393	652	3224	"	0".125 24S-T3 A.A.	HO	2" Hole
394	653	3224	"	" " "	HO	2 1/2" Hole
395	654	3217	"	" " "	HO	2 1/2" Hole
396	655	3246	"	" " "	HO	2 1/2" Hole
397	656	3257	"	" " "	HO	2 1/2" Hole
398	657	1654	0°	0".125 24S-T3 A.A.	NFA	3/4" Hole
399	658	1674	"	" " "	NFA	3/4" Hole
400	659	1626	"	" " "	NFA	3/4" Hole

Tests of Point Detonating Fuse T195E11 for 20mm Ammunition

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