

Trials against Armour Plates and Tubes—continued.

O.B. Minute.	Nature of plate.	Nature of projectile.	Angle of attack from normal.	Striking velocity, f.s.	Projectile.	Result.	Plate.
<i>4-inch Shields.</i>							
9,932	Cammell's $3\frac{1}{4}$ -inch to $1\frac{1}{8}$ -inch shield, No. 9.	6-inch C.P., Mark II., salted Hadfields	45°	1,244	..	..	2 pieces broken off, 21 by 15 inches and 24 by 12 inches.
			"	1,040	..	..	Dish, 2 feet diameter. No cracks.
			"	1,105	..	..	Dish, $2\frac{1}{2}$ feet diameter. No cracks.
			"	1,215	..	..	No cracks.
			"	1,006	..	..	Front hole, 10 by 6 $\frac{1}{2}$ inches. Back damage, 14 by 10 inches.
			"	867	Do.	..	Front hole, 9 by 9 $\frac{1}{2}$ inches. Back damage, 12 by 12 inches.
9,932	Hadfields' "Era" $2\frac{3}{8}$ -inch to $1\frac{1}{8}$ -inch shield, No. G. 93.	Do.	"	852	Broke up	..	Bulged back, $\frac{1}{4}$ inch. No cracks.
<i>Armour Tubes.</i>							
9,932	Beardmore's 5.95-inch tube, No. 6 A. Internal diameter, 2 feet 6 inches. Length, 8 feet.	9.2-inch A.P.C., Mark IV. Hadfield, C.S..	Normal.	1,207	Punched out plug and broke up	..	Front hole, 6 inches. Inside hole, 7 inches by 6 $\frac{1}{2}$ inches. Penetration, 1.9 inches.
11,044	Beardmore's 4-inch tube, No. 4 A. Mean thickness 3.99 inches.	6-inch A.P.C., Mark V. Hadfield, C.S.	11°	1,166	Broke up on face	..	Penetration, 1.9 inches.
			8°	926	Penetrated 4.5 inches	..	Front hole, 5.2 by 5 inches.
			11°	942	Do.	..	Front hole, 5 $\frac{1}{4}$ by 5 inches.
			9°	956	Do.	..	Hole, 5.5 inches.
10,190	Beardmore's tube, No. 6 A. Mean thickness, 5.98 inches. Internal diameter, 2 feet 6 inches. Length, 8 feet.	9.2-inch A.P.C., Mark IV., salted Hadfield, C.S.	3°	1,180	Do.	..	Penetration, 1.9 inches.
			6°	1,179	Do.	..	Penetration, 1.9 inches.
<i>Armour Gratings.</i>							
9,740	Hadfields' O.S. armour gratings.	9.2-inch O.P., Mark VII., filled powder, suspended 1 foot above grating.	Grating A 2 heated to 1,320° F. Grating A 1, tested cold.	No pieces got through grating	..	..	Grating dished $\frac{1}{2}$ inch in length.
				6 pieces (total weight 9 lb.) found below grating.	..	..	Grating dished $\frac{1}{2}$ inch in length.

For "Excellent's" trials at bullet proof plating, see Minutes 10,094, 11,044.

Used plates allotted to the Board: Cammell's 4-inch 6,701. See Minute 9,565.