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REGULATIONS FOR ARMY ORDNANCE SERVICES, PART II. Pamphlet No. 25.

TABLE OF PROBABLE LIFE AND WEAR, &c., OF RIFLING OF ORDNANCE AND MORTARS.

Nature	Probable life of rifling in full rounds cordite, Mk. I	Probable life of rifling in full rounds cordite, M.D.	Condemning limit for mean wear at 1 inch from commencement of rifling (q)	Condemning limit for scoring at any point in the bore plus $\frac{1}{2}$ wear at the same point	Number of equivalent full rounds a gun may fire before requiring examination (r)
<i>Howitzers</i>			Inches	Inches	
B.L. 18-in., Mk. I	—	—	0.76	1.49	50
B.L. 12-in., Mks. III, IV and V	—	1,700	0.27 (a)	0.55	50
B.L. 9.2-in., Mk. I	—	3,500	0.20 (b)	0.40	50
B.L. 9.2-in., Mk. II	—	10,000	0.30 (b)	0.48	50
B.L. 8-in., Mk. VIII	—	10,000	0.30	0.62	100 (c)
B.L. 6-in. 26-cwt., Mk. I'	—	10,000	0.12	0.60	200 (c)
Q.F. 4.5-in., Mks. I and II	—	{ 9,000 (d)	0.10	0.33	300 (c)
Q.F. 3.7-in., Mk. I	—	{ 14,000	0.14	0.33	300 (c)
		{ 12,000	0.10	0.25	500 (c)

TABLE OF PROBABLE LIFE AND WEAR, ETC., OF RIFLING OF ORDNANCE AND MORTARS—*contd.*

Nature	Probable life of rifling in full rounds cordite, Mk. I	Probable life of rifling in full rounds cordite, M.D.	Condemning limit for mean wear at 1 inch from commencement of rifling (g)	Condemning limit for scoring at any point in the bore plus $\frac{1}{2}$ wear at the same point	Number of equivalent full rounds a gun may fire before requiring examination (r)
<i>Guns</i>					
B.L. 15-in., Mk. I	—	{ 335 (s) 260 (t)	0.72 (s) 0.60 (t)	1.25 (u) 1.25 (u)	25 25
B.L. 14-in., Mk. VI	—	—	0.68 (e)	1.34	25
B.L. 9.2-in., Mk. IX	125	450	0.51	0.80	25
B.L. 9.2-in., Mks. X, X ^v and X*	125	450	0.51	0.90	25
B.L. 9.2-in., Mk. XIII	—	2,000	0.51	0.95	50 (c)
B.L. 6-in., Mks. VII and VII ^v ...	900	{ 600 (f) 1,200	0.16 (f) } (g) 0.33	0.70 0.70	50 50
B.L. 6-in., Mk. XIX	—	{ 600 (f) 1,200	0.16 (f) } (g) 0.33	0.875 0.875	100 (c) 100 (c)
B.L. 6-in., Mk. XXI	—	—	0.33 (g)	0.63	50
Q.F. 6-in., Mk. II	1,200	3,600	0.33	0.50	100
B.L. 60-pr., Mks. I to I**	—	6,000	0.22	0.40	100
B.L. 60-pr., Mks. II to II*	—	6,000	0.22	0.48	100
Q.F. 4.7-in., Mks. III to IV* ...	900	2,700	0.10	0.40	100
Q.F. 4.5-in., Mk. II	—	500	0.20	—	50
Q.F. 4-in., Mk. III	700	2,000	0.10	0.30	100
Q.F. 3.7-in., Mks. I and II	—	500	0.185	—	50
Q.F. 25-pr., Mk. I	—	10,000	0.120	—	500
Q.F. 18-pr., Mks. I to II*, IV, IVA and IVB	—	15,000	0.036 (h) (i)	0.35	500 (c)
Q.F. 13-pr., Mks. I to III	—	6,000	0.083 (i)	0.25	500 (c)
Q.F. 12-pr. 12-cwt., Mks. I to II* and IV	900	2,700	0.09	0.25	300 (c)
<i>Mortars</i>					
M.L. 3-in., Mk. II (Plan dia. 3.207-in.)	—	—	0.02 (p)	—	250

NOTES.

(a) For projectiles fitted with driving bands to design R.L. 21693A fitted with augmenting strips to design R.L. 25516B.

(b) This limit may be increased to 0.42 when projectiles banded to R.L. 17888 are used, provided that there is no abnormal loss of muzzle velocity or no considerable inaccuracy.

(c) When scoring begins in these guns, the series for subsequent examinations will be half this number.

(d) This is the probable life when cordite R.D.B. flake is used.

(e) This gun has a shot chamber. The plan diameter at 1 inch=14.08 inches.

(f) With projectiles banded to R.L. 11272.

(g) These guns should also be provisionally condemned when wear at 5 inches from the muzzle reaches 0.06 inch. They should not be condemned, however, for these limits if shooting accurately.

(h) These guns will be provisionally condemned when the bore diameter at 1 inch from the commencement of rifling reaches 3.343 inches, or when the diameter at 10 inches from the commencement of rifling reaches 3.315 inches.

(i) This gun has a shot chamber. The plan diameter at 1 inch=3.307 inches.

(j) This gun has a shot chamber. The plan diameter at 1 inch=3.007 inches.

(k) This is the probable life when 16-lb. projectiles are used.

(l) These guns will alternatively be provisionally condemned when the rifling for 3 inches from the commencement has become obliterated.

(m) Guns not retubed since 1914 have shot chambers. Plan diameter at 1 inch=2.252 inches.

Guns retubed since 1914 have no shot chambers. Plan diameter at 1 inch=2.244 inches.

(n) A new limit for wear is under consideration and, until a decision is reached, these guns will not be condemned for wear or obliteration of rifling while still shooting accurately.

(o) Guns not retubed since 1914 have shot chambers. Plan diameter at 1 inch=1.857 inches. Guns retubed since 1914 have no shot chambers. Plan diameter at 1 inch=1.850 inches.

(p) These mortars will be provisionally condemned when they reach this limit at any point in the bore either horizontal or vertical. Scoring is not anticipated and, whenever observed, must be specially reported to the C.I.A., Royal Arsenal, Woolwich.

(q) Mean wear is the difference between half the sum of the vertical and horizontal diameters of the bore at 1 inch from the commencement of rifling and the plan diameter at that point.

(r) The actual total number of rounds between examinations must not exceed five times the number of equivalent full rounds.

(s) With A.P.C. shell.

(t) With H.E. or C.P.C. shell.

(u) At 1 inch from the commencement of rifling.

TABLE GIVING THE QUARTER OF LIFE OF GUNS AND HOWITZERS.

Nature	Mean wear at 1 inch from commencement of rifling				4th quarter		Remarks
	1st quarter	2nd quarter	3rd quarter		Wear greater than	Scoring (*) greater than — (see Note (2))	
	inches	inches	inches		inches	inches	
<i>Howitzers</i>							
B.L. 18-in., Mk. I	0-0-190	0-191-0-380	0-381-0-570		0-57	See note (10)	
B.L. 12-in., Mk. I	0-0-020	0-021-0-050	0-051-0-090		0-09	0-25	
B.L. 9-2-in., Mk. I	0-0-050	0-051-0-100	0-101-0-150		0-15		
B.L. 9-2-in., Mk. II	0-0-075	0-076-0-150	0-151-0-225		0-225		
B.L. 8-in., Mk. VIII	0-0-090	0-091-0-150	0-151-0-210		0-21	0-5	
B.L. 6-in., 26-cwt., Mk. I	0-0-030	0-031-0-060	0-061-0-090		0-09		
Q.F. 4.5-in., Mk. I and II	0-0-025	0-026-0-050	0-051-0-075		0-075		See note (13).
Q.F. 3.7-in., Mk. I	0-0-025	0-026-0-050	0-051-0-075		0-075		
<i>Guns</i>							
B.L. 15-in., Mk. I	0-0-280	0-281-0-390	0-391-0-490		0-49	—	See note (14).
B.L. 14-in., Mk. VI	0-0-170	0-171-0-340	0-341-0-510		0-51	See note (10)	See note (8).
B.L. 9-2-in., Mk. IX, X, X* and X*	0-0-180	0-181-0-300	0-301-0-400		0-4	0-45	
B.L. 9-2-in., Mk. XIII	0-0-110	0-111-0-190	0-191-0-260		0-26	0-4	
B.L. 6-in., Mk. VII and VII*	0-0-045	0-046-0-080	0-081-0-115		0-115	0-3	See notes (11) and (12).
B.L. 6-in., Mk. XIX	0-0-055	0-056-0-090	0-091-0-115		0-115	0-3	See notes (11) and (12).
B.L. 6-in., Mk. XXI	0-0-080	0-081-0-160	0-161-0-240		0-24	See note (10)	
Q.F. 6-in., Mk. II	0-0-080	0-081-0-140	0-141-0-190		0-19	0-25	
B.L. 60-pr., Mk. I to II*	0-0-052	0-053-0-110	0-111-0-167		0-167		

Q.F. 4.5-in., Mk. II ...	0-0-050	0-051-0-100	0-101-0-150	0-15	—	—
Q.F. 4.7-in., Mk. III to IV*	0-0-025	0-026-0-050	0-051-0-075	0-075	—	—
Q.F. 4-in., Mk. III ...	0-0-025	0-026-0-050	0-051-0-075	0-075	—	—
Q.F. 3.7-in., Mk. I and II ...	0-0-046	0-047-0-092	0-093-0-139	0-139	—	—
Q.F. 25-pr., Mk. I ...	0-0-030	0-031-0-060	0-061-0-090	0-090	—	—
Q.F. 18-pr., Mk. I to II*, IV, IVA and IVB ...	0-0-010	0-011-0-015	0-016-0-020	0-02	0-1	See note (4).
Q.F. 13-pr., Mk. I to III ...	0-0-006	0-007-0-013	0-014-0-020	0-02	0-1	See note (5).
Q.F. 12-pr. 12-cwt., Mk. I to II* and IV ...	0-0-022	0-023-0-045	0-046-0-067	0-067	—	—
Q.F. 3-in. 20-cwt., Mk. I to I**, III, III*, IA, IB and IIIA ...	0-0-035	0-036-0-070	0-071-0-105	0-105	—	—
Q.F. Hotchkiss, 6-pr. 6-cwt., Mk. II ...	0-0-007	0-008-0-014	0-015-0-021	0-021	—	—
Q.F. Hotchkiss, 6-pr. 8-cwt., Mks. I and II ...	0-0-007	0-008-0-014	0-015-0-021	0-021	—	—
Q.F. 6-pr. 10-cwt., Mk. I ...	0-0-025	0-026-0-050	0-051-0-075	0-075	—	—
Q.F. Nordenfellt, 6-pr., Mk. III Q.F. 3-pr. 2-cwt., Mk. I and II ...	0-0-005	0-006-0-010	0-011-0-015	0-015	—	See note (7).
Q.F. 2 pr., Mk. IX and X ...	0-0-008	0-009-0-016	0-017-0-024	0-024	—	—
Sub-calibre, Q.F. 6-pr., Mk. I	0-0-011	0-012-0-023	0-024-0-035	0-035	—	—
Sub-calibre, Q.F. 3-pr., Mk. I I, III, V and VII ...	0-0-007	0-008-0-014	0-015-0-021	0-021	—	—
Sub-calibre, Q.F. 3-pr., Mk. I II, II* and IV ...	0-0-008	0-009-0-016	0-017-0-024	0-024	—	—
Sub-calibre, Q.F. 3-pr., Mk. I II, II* and IV ...	0-0-006	0-007-0-012	0-013-0-018	0-018	—	See note (6).

NOTES.

(1) For those pieces where no figures are given under column (*), the quarter of life is determined entirely by wear (*see* Note 10).

(2) No account will be taken of any scoring in the case of pieces having an entry under (*) if such scoring is less than that shown at (*). When the scoring is greater than that shown at (*), the piece is placed in the 4th quarter or P.C., as the case may be.

(3) In every case the above figures for wear are the amounts above plan figures at 1 inch from the commencement of rifling.

(4) The plan dimension at 1 inch for 18-pr. guns is 3.307 inches.

(5) The plan dimension at 1 inch for 13-pr. 6-cwt. guns is 3.007 inches.

(6) The plan dimension at 1 inch for 3-pr. Nordt. sub-calibre is 1.857 inches if not retubed since 1914, and 1.850 inches if retubed since 1914.

(7) The plan dimension at 1 inch for 6-pr. Nordt. guns is 2.252 inches if not retubed since 1914, and 2.244 inches if retubed since 1914.

(8) The plan dimension at 1 inch for 14-inch, Mk. VI guns is 14.08 inches.

(9) All pieces fitted with short bore and chamber liners, and muzzle liners, should be provisionally condemned.

(10) No data exist to show how these guns will score.

(11) Also to be P.C. if the enlargement at 5 inches from the muzzle is 0.06 in. Guns should not be P.C., however, if shooting accurately.

(12) When using band to design R.L. 11272.

(13) When using Cordite R.D.B. Flake.

(14) Based on Naval Service mean wear curve.

By Command of the Army Council,



THE WAR OFFICE,
6th July, 1938.