## APPENDICES.

## (I.) BRITISH STANDARD SPECIFICATION FOR CREOSOTE FOR THE PRE-SERVATION OF TIMBER.

This specification covers the requirements of creosote suitable for the treatment of railway-sleepers and telegraph, telephone, and hangar poles.

## Type A.

(1.) The material shall consist essentially of a distillate of coal-tar, and shall be free from any admixture of petroleum or similar oils.

(2.) The specific gravity shall be not less than 1015 and not more than 107 at  $38^{\circ}$  C. (100° F.) when compared with water at the same temperature.

(3.) The material shall become completely liquid on being slowly warmed to  $38^{\circ}$  C. (100° F.) with stirring, and on cooling down shall remain completely liquid after standing for two hours at  $32^{\circ}$  C. (90° F.).

(4.) The amount of water in the creosote shall not exceed 3 per cent.

(5.) When roo c.c. measured at  $38^{\circ}$  C. (roo° F.) of the dry creosote are distilled from a 250 c.c. distillation-flask at such a rate that the distillation is complete in about twenty minutes, there shall distil at 760 mm. pressure—Up to 205° C. ( $401^{\circ}$  F.), not more than 7 c.c.; up to  $230^{\circ}$  C. ( $446^{\circ}$  F.), not more than 40 c.c.; up to  $315^{\circ}$  C. ( $599^{\circ}$  F.), not more than 78 c.c.; the volume of all fractions being measured at  $38^{\circ}$  C. ( $100^{\circ}$  F.). The residue above  $315^{\circ}$  C. ( $599^{\circ}$  F.) shall be soft and not sticky, and its weight shall be not less than 22 grms.

(6.) The amount of tar acids shall be not less than 5 per cent. and not more than 16 per cent. by volume.

(7.) The amount of matter insoluble in benzol (benzene) shall not exceed 0.4 per cent. by weight.

## Type B. Alternative for Scotch Creosote.

(I.) Scotch creosote shall conform to the above specification with the following exceptions :---

(2.) The specific gravity shall be not less than I at  $38^{\circ}$  C. (100° F.). In the case of the blast-furnace oil the specific gravity may be lower, but shall not be less than 0.940 at  $38^{\circ}$  C. (100° F.).

(3.) The distillate at 315° C. (599° F.) shall be not more than 85 c.c., and the residue not less than 15 grms.

(4.) There shall be no upper limit to the amount of tar acids.

(2.) AMERICAN WOOD-PRESERVERS' ASSOCIATION STANDARD SPECIFICA-TION FOR CREOSOTE OIL FOR TIES AND STRUCTURAL TIMBER FOR OPEN-TANK TREATMENT.

(I.) The oil shall be distillate of coal-gas tar or coke-oven tar. It shall comply with the following requirements :---

(2.) It shall not contain more than 3 per cent. of water.

(3.) It shall not contain more than 0.5 per cent. of matter insoluble in benzol.

(4.) The specific gravity of the oil at  $38^{\circ}$  C. compared with water at  $15 \cdot 5^{\circ}$  C. shall be not less than  $1 \cdot 03$ .

(5.) The distillate, based on water-free oil, shall be within the following limits :—

	Grade 1.	Grade 2.	Grade 3.
Up to 210° C., not more than	5%	8%	10%
Up to 235° C., not more than	25%	35%	40%

(6.) The residue above 355° C., if it exceeds 5 per cent., shall have a float test of not more than 50 seconds at 70° C.

(7.) The oil shall yield not more than 2 per cent. coke residue.

(8.) The foregoing tests shall be made in accordance with the standard methods of the A.W.P.A.