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[BS/ARP 39. February, 1940.]

BRITISH STANDARD
METHOD
(A.R.P. SERIES)
FOR
TESTING FIRE RETARDENT TIMBER TREATMENT BY
EXPOSURE TO THE ACTION OF AN INCENDIARY BOMB.

This Specification forms one of a series of Standards prepared by the British Standards Institution at the request of the Air Raid Precautions Department of the Ministry of Home Security. It is based on the test which has been devised by the Forest Products Research Laboratory of the Department of Scientific and Industrial Research.

Manufacturers desiring their materials tested by the Department should communicate with the Building Research Station of the Department (The Director, Building Research Station, Garston, Nr. Watford, Herts.)

1. **Scope.** This standard is intended to provide a means for testing fire retardent treatment to be applied to the upper roof timbers of a cleared roof space, the lower timbers of which have been protected by the use of material complying with the test specified in BS/ARP 27.

2. **General.** The method of test consists essentially of igniting an incendiary bomb (*see* Clause 3 (iv)) in a wooden structure (*see* Clause 4) part of the timber of which is treated with the material under test and part with a silicate paint (*see* Clause 3 (iii)) and comparing the resistance of the two materials to the action of the bomb.

3. **Materials.** (i) *Timber.* The timber used for the wooden structure shall be entirely of sapwood of Corsican pine, Scots pine or Baltic redwood and shall be free from knots. It shall be machined on all four sides and conditioned to a moisture content of 11 to 13 per cent.

(ii) *Plywood.* The plywood shall be of birch 6 mm. thick. The glue used in the manufacture of the plywood shall be of the blood albumen type. The moisture content shall be between 11 and 13 per cent.

(iii) *Silicate Paint.* The silicate paint shall conform to the following proportions:—

Kaolin	-	150 lbs.
Sodium silicate	-	112 lbs.
Water	-	100 lbs.

The sodium silicate shall be in the form of an aqueous syrup in which the ratio of silica to soda is between 3.2 and 3.4 and which has a specific gravity between 1.41 and 1.43.

(iv) *Incendiary Bomb.* The incendiary bomb shall be a Home Office practice electron bomb.

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