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To all Chief Fire Officers

19 October 1976

Dear Chief Officer

THE CHARRING OF TIMBER

The "Manual of Firemanship", in Part 6A, chapter 34, section 4(g)(ii), refers to the figure of 1/40th of an inch (0.635 mm) per minute as the charring rate of timber in a standard fire.

I feel I should bring to the attention of Chief Officers, who may use this figure for specific and localised purposes, such as might be required in a forensic investigation, that it merits qualification. Draft British Standard BS 112 Part 4 (circulated for public comment) quotes the rates of charring of timber as follows:

- |   |                  |
|---|------------------|
| 1. Species having densities less than<br>420 Kg/m <sup>3</sup>  | 25 mm in 30 mins |
| 2. Species having densities of<br>420 Kg/m <sup>3</sup> of more | 20 mm in 30 mins |
| 3. Hardwoods  | 15 mm in 30 mins |

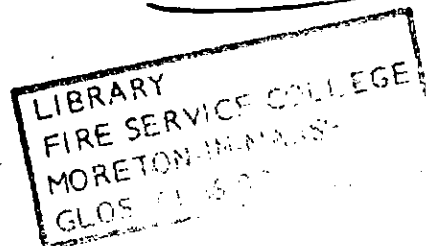
However, the rate increases above the values given if the fire develops more rapidly, and reaches higher temperatures than those considered, which are based on a temperature rise as employed in the British Standard Test for Fire Resistance BS 476 Part 8.

Amendments to the appropriate sections of the "Manual" will be considered when this Part is revised.

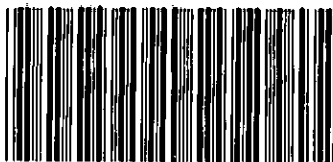
Yours sincerely

*Annex Malla*

No 78/1976



**The Fire Service  
College**



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