

The Fire Performance of Exposed Timber Panels

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Abstract : Cross-laminated timber is increasingly being used in the construction of high-rise buildings due to its simple manufacturing system. In term of fire resistance, cross-laminated timber panels are promoted as having excellent fire resistance, comparable to that of non-combustible materials and to heavy timber construction, due to the ability of thick wood assemblies to char slowly at a predictable rate while maintaining most of their strength during the fire exposure. This paper presents an overview of fire performance of cross-laminated timber and evaluation of its resistance to elevated temperature in comparison to homogeneous timber panels. Charring rates for cross-laminated timber panels of those obtained experimentally were compared with those provided by Eurocode simplified calculation methods.

Keywords : timber structure, cross-laminated timber, charring rate, timber fire resistance

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