



Group Action of Axially-Loaded Screws in the Narrow Face of Cross Laminated Timber

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Summary:

Withdrawal properties of axially-loaded groups of screws in the narrow face of cross laminated timber (CLT) are investigated by means of a stochastic approach based on a single screw model which provides a complete stochastic description of the load-displacement curve. Different group dimensions and configurations are analysed, featuring screws with equal or different thread-fibre angles. The stochastic approach is successfully verified by tests. Influences caused by shortcomings in assembling and by screws penetrating knots as well as gaps are addressed. Suggestions, relevant for the development of CLT system connectors and for practical applications, are made.

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