An Innovative Method Based on Grain Angle Measurement to Sort Veneer and Predict Mechanical Properties of Beech Laminated Veneer Lumber

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Summary:

Cross-Laminated Timber (CLT) structures exhibit satisfactory performance under seismic conditions. This ispossible because of the high strength-to-weight ratio and in-plane stiffness of the CLT panels, and the capacity ofconnections to resist the loads with ductile deformations and limited impairment of strength. This study sum-marises a part of the activities conducted by the Working Group 2 of COST Action FP1402, by presenting an in-depth review of the research works that have analysed the seismic behaviour of CLT structural systems. Thefirstpart of the paper discusses the outcomes of the testing programmes carried out in the lastfifteen years anddescribes the modelling strategies recommended in the literature. The second part of the paper introduces theq-behaviour factor of CLT structures and provides capacity-based principles for their seismic design.

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