



Proposal for a Standardized Design and Modeling Procedure of Tall CLT Buildings

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Summary:

A crucial issue in the design of a mid-rise Cross Laminated Timber (CLT) building under horizontal seismic action, is the definition of the principal elastic vibration period of an entire superstructure. Such vibration period depends on the mass distribution and on the global stiffness of the buildings. In a CLT structure the global stiffness of the buildings is highly sensitive to deformability of the connection elements. Consequently for a precise control of the vibration period of the building it is crucial to define the stiffness of each connections used to assemble a superstructure. A design procedure suitable for a reliable definition of the connection stiffness is proposed referring to code provisions and experimental tests. Discussion addresses primary issues associated with the usage of proposed procedure for numerical modeling of case study tall CLT buildings is reported.

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