



## Experimental and Numerical Evaluation of Cross-Laminated Timber (CLT) Panels Produced with Pine Timber from Thinnings in Uruguay

<https://research.thinkwood.com/en/permalink/catalogue1601>

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Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: CLT (Cross-Laminated Timber)

Application: Floors

Topic: Market and Adoption  
Mechanical Properties

Keywords: Uruguay  
Pine  
Finite Element Model  
Strength

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria  
p. 1948-1955

### Summary:

Due to the high volume of timber required for manufacturing, the production of cross-laminated timber (CLT) panels could be an appropriate destiny for the existing surplus of pinewood presently available in Uruguay. Although wood construction is uncommon in this country, there are some companies with the capacity to adapt their production to new products such as CLT. This work evaluates the properties of CLT panels manufactured in Uruguay with local pine (*Pinus taeda* and *Pinus elliottii*) from forest plantation thinning, which typically present low mechanical properties. Boards and panels were mechanically tested and the mechanical properties were determined, showing a strength class lower than C14. A numerical model, using the finite element method, was developed and the numerical results were compared with the experimental values. The results provided a first approach to the conditions and limitations of the use of CLT panels for building floors, produced under the current manufacturing conditions in Uruguay.

Online Access: Free

### Resource Link

<http://hdl.handle.net/20.500.12708/172> ↗

