



Seismic Performance of Embedded Steel Beam Connection in Cross-Laminated Timber Panels for Tall-Wood Hybrid System

<https://research.thinkwood.com/en/permalink/catalogue415>

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Publisher: Canadian Science Publishing

Year of Publication: 2017

Country of Publication: Canada

Format: Journal Article

Material: CLT (Cross-Laminated Timber)

Application: Hybrid Building Systems

Topic: Seismic

Keywords: Timber-Steel Hybrid
Energy Dissipation
FFTT
Quasi-Static
Monotonic Test
Reverse Cyclic Test
Failure mechanism
Beam Profiles
Embedment

Language: English

Series: Canadian Journal of Civil Engineering

Abstract:
Recent developments in novel engineered mass timber products and connection systems have created the possibility to design and construct tall timber-based buildings. This research presents the experiments conducted on the steel-wood connection as main energy dissipating part of a novel steel-timber hybrid system labelled Finding the Forest Through the Trees (FFTT)...

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Online Access: Free

Resource Link

<https://tspace.library.utoronto.ca/bitstream/1807/77971/1/cjce-2016-0386.pdf>



Structural Analysis of In-Plane Loaded CLT Beams

<https://research.thinkwood.com/en/permalink/catalogue1213>

Author: Mario Jelec
Kristina Strukar
Vlatka Rajcic

Organization: University of Osijek

Year of Publication: 2017

Country of Publication: Croatia

Format: Journal Article

Material: CLT (Cross-Laminated Timber)

Application: Beams

Topic: Mechanical Properties

Keywords: In-Plane Loading
Shear Stress
Failure Modes
FE Analysis
Eurocode 5

Language: English

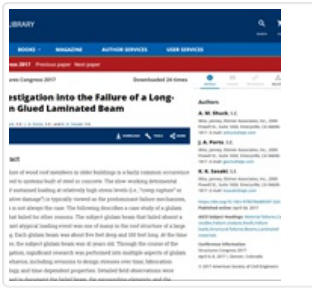
Series: e-GFOS

ISSN: 1847-8948

Online Access: Free

Resource Link

<https://doi.org/10.13167/2017.14.3>



Investigation into the Failure of a Long-Span Glued Laminated Beam

<https://research.thinkwood.com/en/permalink/catalogue1251>

Author: Andrew Shuck
Jason Porto
Kent Sasaki

Organization: Structures Congress

Publisher: American Society of Civil Engineers

Year of Publication: 2017

Country of Publication: United States

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Roofs

Topic: Mechanical Properties

Keywords: Failure

Language: English

Conference: Structures Congress 2017

Notes: April 6–8, 2017, Denver, Colorado

Abstract:

The failure of wood roof members in older buildings is a fairly common occurrence compared to systems built of steel or concrete. The slow-working detrimental effect of sustained loading at relatively high stress levels (i.e., “creep rupture” or “cumulative damage”) is typically viewed as the predominant failure mechanism, but this is not always the case...

Online Access: Payment Required

Resource Link

<https://doi.org/10.1061/9780784480397.024>



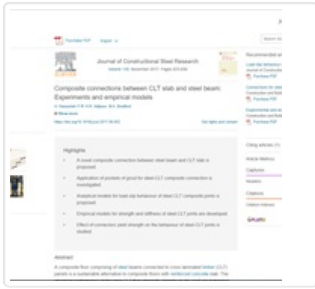
Seismic Design of Timber Steel Hybrid High-Rise Buildings

<https://research.thinkwood.com/en/permalink/catalogue1270>

Author: Xiaoyue Zhang
Organization: University of British Columbia
Year of Publication: 2017
Country of Publication: Canada
Format: Thesis
Application: Hybrid Building Systems
Topic: Seismic
Connections
Keywords: Timber-Steel Hybrid
FFTT
Seismic Performance
Strength
Stiffness
Ductility
Failure Mechanisms
Force Reduction Factors
High-Rise
Language: English
Online Access: Free

Resource Link

<http://doi.org/10.14288/1.0348302>



Composite Connections between CLT Slab and Steel Beam: Experiments and Empirical Models

<https://research.thinkwood.com/en/permalink/catalogue1321>

Author: Amirhossein Hassanieh
Hamid Valipour
Mark Bradford

Publisher: ScienceDirect

Year of Publication: 2017

Country of Publication: Netherlands

Format: Journal Article

Material: CLT (Cross-Laminated Timber)
Steel-Timber Composite

Application: Floors

Topic: Design and Systems
Mechanical Properties
Connections

Keywords: Short-term
Push-Out Tests
Bolted Shear Connectors
Load-Slip
Failure Mode
Stiffness
Strength

Language: English

Series: Journal of Constructional Steel Research

Online Access: Payment Required

Resource Link

<https://doi.org/10.1016/j.jcsr.2017.09.002>



Planar Shear and Bending Properties of Hybrid CLT Fabricated with Lumber and LVL

<https://research.thinkwood.com/en/permalink/catalogue1324>

Author: Zhiqiang Wang
Hongmei Fu
Meng Gong
Jiayan Luo
Weiqun Dong
Ting Wang
Ying Hei Chui

Publisher: ScienceDirect

Year of Publication: 2017

Country of Publication: Netherlands

Format: Journal Article

Material: CLT (Cross-Laminated Timber)
LVL (Laminated Veneer Lumber)

Application: General Application

Topic: Mechanical Properties

Keywords: Rolling Shear Modulus
Rolling Shear Strength
SPF
Failure Modes

Language: English

Series: Construction and Building Materials

Online Access: Payment Required

Resource Link

<https://doi.org/10.1016/j.conbuildmat.2017.04.205>



Cross Laminated Timber (CLT) Diaphragms under Shear: Test Configuration, Properties and Design

<https://research.thinkwood.com/en/permalink/catalogue1332>

Author: Reinhard Brandner
Philipp Dietsch
Julia Dröschner
Michael Schulte-Wrede
Heinrich Kreuzinger
Mike Sieder

Publisher: ScienceDirect

Year of Publication: 2017

Country of Publication: Netherlands

Format: Journal Article

Material: CLT (Cross-Laminated Timber)

Application: General Application

Topic: Design and Systems
Mechanical Properties

Keywords: Failure Mechanisms
Gross-Shear
Net-Shear
In-Plane

Language: English

Series: Construction and Building Materials

Online Access: Payment Required

Resource Link

<https://doi.org/10.1016/j.conbuildmat.2017.04.153>



Experimental and Numerical Investigation of Short-Term Behaviour of CLT-Steel Composite Beams

<https://research.thinkwood.com/en/permalink/catalogue1334>

Author: Amirhossein Hassanieh
Hamid Valipour
Mark Bradford

Publisher: ScienceDirect

Year of Publication: 2017

Country of Publication: Netherlands

Format: Journal Article

Material: Steel-Timber Composite
CLT (Cross-Laminated Timber)

Application: Floors

Topic: Mechanical Properties

Keywords: Short-term
Peak Load
Full Scale
Four Point Bending Test
Finite Element Analysis
Load-Deflection Response
Stiffness
Failure Modes

Language: English

Series: Engineering Structures

Online Access: Payment Required

Resource Link

<https://doi.org/10.1016/j.engstruct.2017.04.052>



Feasibility of Manufacturing Cross-Laminated Timber using Fast-Grown Small Diameter Eucalyptus Lumbers

<https://research.thinkwood.com/en/permalink/catalogue1347>

Author: Yuchao Liao
Dengyun Tu
Jianhui Zhou
Haibin Zhou
Hong Yun
Jin Gu
Chuanshuang Hu

Publisher: ScienceDirect

Year of Publication: 2017

Country of Publication: Netherlands

Format: Journal Article

Material: CLT (Cross-Laminated Timber)

Application: General Application

Topic: Mechanical Properties

Keywords: Eucalyptus
Manufacturing
Block Shear Strength
Wood Failure Percentage
Rate of Delamination
Modulus of Rupture
Modulus of Elasticity

Language: English

Series: Construction and Building Materials

Online Access: Payment Required

Resource Link

<https://doi.org/10.1016/j.conbuildmat.2016.12.027>



Bending Tests on Timber-Concrete Composite Members Made of Beech Laminated Veneer Lumber with Notched Connection

<https://research.thinkwood.com/en/permalink/catalogue1349>

Author: Lorenzo Boccadoro
Simon Zweidler
René Steiger
Andrea Frangi

Publisher: ScienceDirect

Year of Publication: 2017

Country of Publication: Netherlands

Format: Journal Article

Material: Timber-Concrete Composite
LVL (Laminated Veneer Lumber)

Application: General Application

Topic: Mechanical Properties

Keywords: Notched Connections
Analytical Model
Vertical Load
Ductility
Compressive Failure
Bending Test

Language: English

Series: Engineering Structures

Online Access: Payment Required

Resource Link

<https://doi.org/10.1016/j.engstruct.2016.11.029>