



Adaptation of Advanced High R-Factor Bracing Systems into Heavy Timber Frames

<https://research.thinkwood.com/en/permalink/catalogue1760>

Author: Gilbert, Colin
Erochko, Jeffrey

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Frames

Topic: Seismic
Design and Systems
Mechanical Properties

Keywords: Quasi-Static
Cyclic Testing
Ductility
Damping Devices
R-factors

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 5068-5077

Summary:

Timber provides attractive earthquake performance characteristics for regions of high seismic risk, particularly its high strength-to-weight ratio; however, current timber structural systems are associated with relatively low design force reduction factors due to their low inherent ductility when compared to high-performance concrete and steel...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650029>



Analysis of the Timber-Concrete Composite Systems with Ductile Connection

<https://research.thinkwood.com/en/permalink/catalogue113>

Author: Zhang, Chao
Organization: University of Toronto
Year of Publication: 2013
Country of Publication: Canada
Format: Thesis
Material: Timber-Concrete Composite
Application: General Application
Topic: Mechanical Properties
Keywords: Bending
Ductility
Model
Load Deflection
Tension
Shear Connection
Language: English
Research Status: Complete
Online Access: Free

Resource Link

<http://hdl.handle.net/1807/35705> 



An Innovative Hybrid Timber Structure in Japan: Beam-to-Beam Moment Resisting Connection

<https://research.thinkwood.com/en/permalink/catalogue1581>

Author: Kusumoto, Shigeharu
Shioya, Shinichi
Kawabe, Ryosuke
Inomoto, Kotaro

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Connections
Mechanical Properties

Keywords: Steel Bars
Epoxy
Beam-to-Beam
Four Point Bending Test
Short-term
Long-term
Ductility

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 17911798

Summary:

Hybrid composite glulam timber reinforced using deformed steel bars and epoxy resin adhesive (RGTSB), was significantly developed in Kagoshima University. In this paper, a beam-to-beam connection for RGTSB and experimental data on the connection are presented...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1607740>



An Innovative Hybrid Timber Structure in Japan: Performance of Column and Beams

<https://research.thinkwood.com/en/permalink/catalogue1759>

Author: Shioya, Shinichi
Koga, Takeshi
Kumon, Yuto
Otsuki, Kazuaki
Uchimura, Kohei

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Beams
Columns

Topic: Mechanical Properties

Keywords: Japanese Cedar
Reinforcement
Steel Bars
Epoxy
Flexural Stiffness
Flexural Strength
Reverse Cyclic Loading
Force-Displacement Curves
Strain Distribution
Failure
Numerical Analysis

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 5058-5067

Summary:

In this paper, bending behaviours in hybrid composite glulam timbers reinforced using deformed steel bars and epoxy resin adhesives (RGTSB) are presented. The technique RGTSB was developed in order to improve flexural stiffness and strength in glulam timbers...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650028>



Assessment of Disproportionate Collapse for Multi Storey Cross Laminated Timber Buildings

<https://research.thinkwood.com/en/permalink/catalogue1664>

Author: Mpidi Bitu, Hercend
Currie, Neil
Tannert, Thomas

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: CLT (Cross-Laminated Timber)

Application: Wood Building Systems

Topic: Connections
Mechanical Properties

Keywords: Rotational Stiffness
Multi-Storey
Ductility
Loading

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 3725-3733

Summary:

This paper investigates the risk of disproportionate collapse following extreme loading events. The methodology mimics a sudden removal of a loadbearing wall of a twelve-storey CLT building. The ductility-demand from the dynamic simulation is checked against the ductility supplied by the structural components and their connections...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1649374> ↗



Bending Behaviour of Glulam Beams Reinforced with Carbon FRP Plates

<https://research.thinkwood.com/en/permalink/catalogue449>

Author: Glišovic, Ivan
Stevanovic, Boško
Petrovic, Miloš

Publisher: Taylor&Francis Online

Year of Publication: 2015

Country of Publication: United Kingdom

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Mechanical Properties

Keywords: Reinforcement
Carbon Fiber Reinforced Polymer
Flexure
Failure
Four Point Bending Test

Language: English

Research Status: Complete

Series: Journal of Civil Engineering and Management

Online Access: Free

Resource Link

<http://bme.vgtu.lt/index.php/JCEM/article/download/2694/2205>



Bending Stiffness Increasing of Existing Pitch Pine Beams by Means of LVL Reinforcement

<https://research.thinkwood.com/en/permalink/catalogue1568>

Author: Soilán, Azahara
Touza, Manuel
Arriaga, Francisco
Guaita, Manuel

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: LVL (Laminated Veneer Lumber)

Application: Beams

Topic: Mechanical Properties

Keywords: Pine
Self-Tapping Screws
Reinforcement
Rigidity
Bending Strength
Four Point Bending Test
Modulus of Rupture
Modulus of Elasticity

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 1675-1681

Summary:

Many buildings in Spain constructed with "pitch pine" beams are, nowadays, under rehabilitation processes. In some cases the decision on maintaining, or not, the existing timber structure is a key issue. The commercial name "pitch pine" comprises several species in the group of Southern Yellow Pines, being the "Longleaf pine"...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1607724>



Comparison of Glulam Post-To-Beam Connections Reinforced by two Different Dowel-Type Fasteners

<https://research.thinkwood.com/en/permalink/catalogue55>

Author: He, Minjuan
Liu, Hui-Fen

Publisher: ScienceDirect

Year of Publication: 2015

Country of Publication: Netherlands

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Connections
Mechanical Properties

Keywords: Reinforcement
Rods
Seismic
Self-Tapping Screws
Moment Resistance

Language: English

Research Status: Complete

Series: Construction and Building Materials

Online Access: Free

Resource Link

<https://doi.org/10.1016/j.conbuildmat.2015.09.005>



Comparison of Verification and Reinforcement Concepts for Timber Beams with Large Round Holes

<https://research.thinkwood.com/en/permalink/catalogue1714>

Author: Dröscher, Julia
Augustin, Manfred
Schickhofer, Gerhard

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: CLT (Cross-Laminated Timber)
Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Mechanical Properties

Keywords: Reinforcement
Shear Stresses
Tensile Stresses
Load Carrying Capacity
Numerical Investigation
Analytical Investigation

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 4529-4538

Summary:

Within this paper a comparison of different reinforcement concepts for timber beams with round holes is carried out. Therefore currently applied standardized methods and two recently developed approaches are considered. By means of numerical and analytical investigations it becomes apparent that the analysed reinforcement methods...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1649861> 



Connections for CLT Diaphragms in Steel-Frame Buildings

<https://research.thinkwood.com/en/permalink/catalogue1594>

Author: Joyce, Tom
Smith, Ian

Organization: NEWBuildS

Year of Publication: 2014

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)

Application: Hybrid Building Systems

Topic: Connections
Mechanical Properties

Keywords: Steel
Connections
Self-Tapping Screws
Fabrication
Strength
Stiffness
Ductility

Language: English

Research Status: Complete

Online Access: Free

Resource Link

https://www.researchgate.net/publication/337063778_Connections_for_CLT_diaphragms_in_steel-framed_buildings 