



7 – Glue-Laminated Timber (Glulam)

<https://research.thinkwood.com/en/permalink/catalogue1165>

Author: Chee Beng Ong
 Publisher: ScienceDirect
 Year of Publication: 2015
 Country of Publication: Netherlands
 Publication:
 Format: Book Section
 Material: Glulam (Glue-Laminated Timber)
 Application: General Application
 Topic: General Information
 Connections
 Keywords: Production
 Adhesives
 Finger Joints
 Language: English
 Research Status: Complete
 Series: Wood Composites
 Online Access: Payment Required

Resource Link

<https://doi.org/10.1016/B978-1-78242-454-3.00007-X>



Acoustically-Tested Mass Timber Assemblies

<https://research.thinkwood.com/en/permalink/catalogue1874>

Organization:	WoodWorks
Year of Publication:	2019
Country of Publication:	United States
Format:	Report
Material:	CLT (Cross-Laminated Timber) NLT (Nail-Laminated Timber) Glulam (Glue-Laminated Timber)
Application:	Floors Walls
Topic:	Acoustics and Vibration
Keywords:	Mass Timber Sound Transmission Class Impact Isolation Class Assembly
Language:	English
Research Status:	Complete
Online Access:	Free

Resource Link

<http://www.woodworks.org/wp-content/uploads/Acoustically-Tested-Mass-Timber-Assemblies-WoodWorks.pdf>



Acoustic Impact Testing and Waveform Analysis for Damage Detection in Glued Laminated Timber

<https://research.thinkwood.com/en/permalink/catalogue771>

Author: Feng Xu
Xiping Wang
Marko Teder
Yunfei Liu

Publisher: De Gruyter

Year of Publication: 2017

Country of Publication: Germany

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Application: General Application

Topic: Acoustics and Vibration
Serviceability

Keywords: Decay
Delamination
Damage Detection
Moment Analysis
Wavelet Transform
Acoustic Signals

Language: English

Research Status: Complete

Series: Holzforschung

ISSN: 1437-434X

Online Access: Free

Resource Link

<https://www.fs.usda.gov/treearch/pubs/download/55133.pdf>



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

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

Author: Colin Gilbert
Jeffrey Erochko

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

Abstract:

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>



Adhesion Performance of Melamine-Urea-Formaldehyde Resins with Various Melamine Contents for Glued Laminated Timber by High Frequency Heating System

<https://research.thinkwood.com/en/permalink/catalogue1515>

Author: Byung-Dae Park
Keon-Ho Kim
Kugbo Shim
Min-Kug Hong

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: General Application

Topic: Connections
Mechanical Properties

Keywords: MUF
Adhesives
PRF
High Frequency
Korea
Delamination Test
Pine
Water Resistance

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 504-510

Abstract:

This work attempted to investigate adhesion performance of melamine-urea-formaldehyde (MUF) resin adhesives for bonding glued-laminated timber (Glulam). Two preparation methods were employed to formulate MUF resins with various melamine contents from 20 % to 50 %: one-step method of synthesizing MUF resins in a batch...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1567654> ↗




Adhesive Bonding of Structural Hardwood Elements

<https://research.thinkwood.com/en/permalink/catalogue75>

Author: Mohammad Hassani
Organization: ETH Zurich
Year of Publication: 2015
Country of Publication: Switzerland
Format: Thesis
Material: Glulam (Glue-Laminated Timber)
CLT (Cross-Laminated Timber)
Application: General Application
Topic: Mechanical Properties
Serviceability
Moisture
Keywords: Abaqus
Adhesives
Beech
Bonding
Delamination
Finite Element Model
Fracture
Long-term
Model
Hardwood
Language: English
Research Status: Complete
Online Access: Free

Resource Link

<http://dx.doi.org/10.3929/ethz-a-010528229> 



Advanced Wood-Based Solutions for Mid-Rise and High-Rise Construction: Modelling of Timber Connections Under Force and Fire

<https://research.thinkwood.com/en/permalink/catalogue1473>

Author: Zhiyong Chen
Chun Ni
Christian Dagenais

Organization: FPInnovations

Year of Publication: 2018

Country of Publication: Canada

Format: Report

Material: LVL (Laminated Veneer Lumber)
Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Connections
Fire
Seismic
Design and Systems

Keywords: Finite Element Model
Bolted Connection
Load-Displacement Curves

Language: English

Research Status: Complete

Notes: Report is currently not available due to the redevelopment of FPInnovations' publications website.

Abstract:

FPInnovations carried out a survey with consultants and researchers on the use of analytical models and software packages related to the analysis and design of mass timber buildings. The responses confirmed that a lack of suitable models and related...

Online Access: Payment Required

Resource Link

https://fpinnovations.ca/Extranet/Pages/AssetDetails.aspx?item=/Extranet/Assets/ResearchReportsWP/16794.pdf#.Wzz_ivlKiUI



Air-Coupled Ultrasound Propagation and Novel Non-Destructive Bonding Quality Assessment of Timber Composites

<https://research.thinkwood.com/en/permalink/catalogue13>

Author: Sergio Martín
Organization: ETH Zurich
Year of Publication: 2012
Country of Publication: Switzerland
Publication:
Format: Thesis
Material: Glulam (Glue-Laminated Timber)
Application: General Application
Topic: Mechanical Properties
Keywords: Adhesives
Bonding
Delamination
Failure
Non-Destructive Testing
Air-coupled Ultrasound (ACU)
Finite-Difference Time-Domain (FDTD) model
Language: English
Research Status: Complete
Online Access: Free

Resource Link

<http://dx.doi.org/10.3929/ethz-a-7335172>



An Accurate One-Dimensional Theory for the Dynamics of Laminated Composite Curved Beams

<https://research.thinkwood.com/en/permalink/catalogue889>

Author: Gerardo Carpentieri
Francesco Tornabene
Luigi Ascione
Fernando Fraternalia

Publisher: ScienceDirect

Year of Publication: 2014

Country of Publication: Netherlands

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Mechanical Properties

Keywords: Dynamic Behavior
Mechanical Theory
Finite Element Model
Bending
Shear
Deformation

Language: English

Research Status: Complete

Series: Journal of Sound and Vibration

Online Access: Free

Resource Link

http://www.fernandofraternaliaresearch.com/publications/JSV_2015.pdf



An Enhanced Beam Model for Glued Laminated Structures that takes Moisture, Mechano-sorption and Time Effects into Account

<https://research.thinkwood.com/en/permalink/catalogue44>

Author: Sigurdur Ormarsson
Jan Steinnes

Year of Publication: 2014

Country of Publication: Canada

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Moisture
Serviceability

Keywords: Climate
Creep
Finite Element Model
Hygro-Mechanical
Long-term
Visco-Elastic

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 10-14, 2014, Quebec City, Canada

Abstract:

There is a need of more advanced analysis for studying how the long-term behaviour of glued laminated timber structures is affected by creep and by cyclic variations in climate. A beam theory is presented able to simulate the overall hygro-mechanical and...

Online Access: Free

Resource Link

http://orbit.dtu.dk/files/118444933/ABS311_Ormarsson_web.pdf