



Ability of Finger-Jointed Lumber to Maintain Load at Elevated Temperatures

<https://research.thinkwood.com/en/permalink/catalogue1832>

Author: Rammer, Douglas
Zelinka, Samuel
Hasburgh, Laura
Craft, Steven

Publisher: Forest Products Laboratory

Year of Publication: 2018

Country of Publication: United States

Format: Journal Article

Material: Other Materials

Application: General Application

Topic: Fire

Keywords: Small Scale
Full Scale
Bending Test
Melamine Formaldehyde
Phenol-Resorcinol Formaldehyde
Creep
Polyurethane
Polyvinyl Acetate
Temperature
Durability

Language: English

Research Status: Complete

Series: Wood and Fiber Science. 50(1): 44-54.

Online Access: Free

Resource Link

https://www.fpl.fs.fed.us/documnts/pdf2018/fpl_2018_rammer001.pdf



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

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

Summary:

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> ↗



Bending Strength and Stiffness of Glulam Beams Made of Thermally Modified Beech Timber

<https://research.thinkwood.com/en/permalink/catalogue659>

Author: Widmann, Robert
Beikircher, Wilfried
Cabo, José
Steiger, René

Publisher: Springer, Dordrecht

Year of Publication: 2014

Country of Publication: Netherlands

Format: Book Section

Material: Glulam (Glue-Laminated Timber)

Application: Beams

Topic: Mechanical Properties

Keywords: MUF
PRF
Thermally Modified Timber
Beech
Load Carrying Behaviour
Four Point Bending Test
Delamination Tests
Shear Tests

Language: English

Research Status: Complete

Series: Materials and Joints in Timber Structures

ISBN: 978-94-007-7811-5

Online Access: Payment Required

Resource Link

http://dx.doi.org/10.1007/978-94-007-7811-5_52



Effective Bonding Parameters for Hybrid Cross-Laminated Timber (CLT)

<https://research.thinkwood.com/en/permalink/catalogue1368>

Author: Larkin, Blake
Organization: Oregon State University
Year of Publication: 2017
Country of Publication: United States
Format: Thesis
Material: CLT (Cross-Laminated Timber)
Application: General Application
Topic: Mechanical Properties
Connections
Keywords: North America
Low-Grade
Adhesives
Bond Integrity
Polyurethane
Phenol-Resorcinol Formaldehyde
Lodgepole Pine
Douglas-Fir
Hemlock
Manufacturing
Language: English
Research Status: Complete
Online Access: Free

Resource Link

http://ir.library.oregonstate.edu/concern/graduate_thesis_or_dissertations/cz30px59b



Effect of Adhesives and Ply Configuration on the Fire Performance of Southern Pine Cross-Laminated Timber

<https://research.thinkwood.com/en/permalink/catalogue1682>

Author: Hasburgh, Laura
Bourne, Keith
Peralta, Perry
Mitchell, Phil
Schiff, Scott
Pang, Weichiang

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: CLT (Cross-Laminated Timber)

Application: General Application

Topic: Connections
Fire

Keywords: Southern Pine
Adhesives
Ply Configuration
Fire Performance
Melamine Formaldehyde
Phenol-Resorcinol Formaldehyde
Polyurethane
Emulsion Polymer Isocyanate
Delamination
Char Rate

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 4031-4038

Summary:

Thirteen Southern pine cross-laminated timber panels were tested in the intermediate scale horizontal furnace at the Forest Products Laboratory to determine the effects different adhesives and ply configuration had on fire performance. Four different adhesives were tested...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1649411> ↗



Estimation of Radio Frequency Electric Field Strength for Dielectric Heating of Phenol-Resorcinol-Formaldehyde Resin Used for Manufacturing Glulam

<https://research.thinkwood.com/en/permalink/catalogue1505>

Author: Yang, Sang-Yun
Han, Yeonjung
Park, Yonggun
Eom, Chang-Deuk
Kim, Se-Jong
Kim, Kwang-Mo
Park, Moon-Jae

Publisher: The Korean Society of Wood Science Technology

Year of Publication: 2014

Country of Publication: Korea

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Application: General Application

Topic: Connections

Keywords: Adhesives
Phenol-Resorcinol Formaldehyde
Larch
High Frequency
Specific Heat
Density
Dielectric

Language: Korean

Research Status: Complete

Series: Journal of the Korean Wood Science and Technology

Online Access: Free

Resource Link

<http://doi.org/10.5658/WOOD.2014.42.3.339>



Feasibility of Glued Laminated Timber Beams with Tropical Hardwoods

<https://research.thinkwood.com/en/permalink/catalogue118>

Author: Bourreau, Damien
Aimene, Yamina
Beauchêne, Jacques
Thibaut, Bernard

Publisher: Springer

Year of Publication: 2013

Country of Publication: Germany

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Application: General Application

Topic: Connections
Mechanical Properties

Keywords: Delamination
Hardwood
Phenol-Resorcinol Formaldehyde
Shear
Testing
Tropical Climate

Language: English

Research Status: Complete

Series: European Journal of Wood and Wood Products

ISSN: 1436-736X

Online Access: Free

Resource Link

<https://hal.archives-ouvertes.fr/hal-00856933>



Fire Safe Glued Massive Timber Members Adhesive Bonding Performance under Elevated Temperature -Tests Report

<https://research.thinkwood.com/en/permalink/catalogue169>

Author: Zhang, Chao
Yan, Huijun
Lee, George
Lam, Frank

Organization: Forestry Innovation Investment

Year of Publication: 2013

Country of Publication: Canada

Format: Report

Material: Solid-sawn Heavy Timber

Application: General Application

Topic: Fire
Mechanical Properties

Keywords: Temperature
Adhesives
Bondlines
Polyurethane
Douglas-Fir
Hemlock
SPF
Phenol-Resorcinol Formaldehyde
Epoxy

Language: English

Research Status: Complete

Summary:
This project was conducted to quantify the performance of adhesives bond lines under shear load subject to elevated temperature. The results add to the understanding of the performance of polyurethane adhesive bond lines under elevated temperatures to ad...

Online Access: Free

Resource Link

<http://www.bcfii.ca/system/files/reports/public/fii405-2012-13-ubc-cawp-fire-safe-glued-massive-timber-members-adhesive-bonding-performance-under-elevated-temperature.pdf>



Investigation of Gluelines Block Shear Strength of Norway Spruce Glulam Joints in a Cold Climate

<https://research.thinkwood.com/en/permalink/catalogue526>

Author: Wang, Alice
Björnberg, Jonatan
Hagman, Olle
Ahmed, Sheikh
Wan, Hui
Niemz, Peter

Publisher: North Carolina State University

Year of Publication: 2016

Country of Publication: United States

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Application: General Application

Topic: Connections
Mechanical Properties

Keywords: Melamine Urea Formaldehyde
Phenol-Resorcinol Formaldehyde
Adhesives
Block Shear Strength
Temperature
Climate
Melamine Formaldehyde

Language: English

Research Status: Complete

Series: BioResources

Online Access: Free

Resource Link

https://www.researchgate.net/profile/Reinhard_Brandner/publication/261884030_Production_and_Technology_of_Cross_Laminated_Timber_CLT_A_state-of-the-art_Report/links/Of317535dfd826c0a1000000.pdf



Mechanical Performance of Glue Joints in Structural Hardwood Elements

<https://research.thinkwood.com/en/permalink/catalogue1517>

Author: Niemz, Peter
Ammann, Samuel

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: General Application

Topic: Mechanical Properties
Connections

Keywords: Beech
Joints
Crack Propagation
PRF
Delamination Test
Shear Strength
Fracture Energy

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 526-533

Summary:

Mechanical Performance of Glue Joints in Structural Hardwood Elements as those for solid beech wood, wherein also the crack propagation takes place. It can be concluded that such joints have the necessary strength to be...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1567657> ↗