Acoustic Emission of Bolt-Bearing Testing on Structural Composite Lumbers

https://research.thinkwood.com/en/permalink/catalogue1443

Author: Du, Yicheng
Zhang, Jilei
Shi, Sheldon

Publisher: Society of Wood Science and Technology
Year of Publication: 2014
Country of Publication: United States
Format: Journal Article
Material: LVL (Laminated Veneer Lumber)
OSL (Oriented Strand Lumber)
Topic: Acoustics and Vibration
Keywords: Acoustic Emission
Bolted Connection
Language: English
Research Status: Complete
Series: Wood and Fiber Science

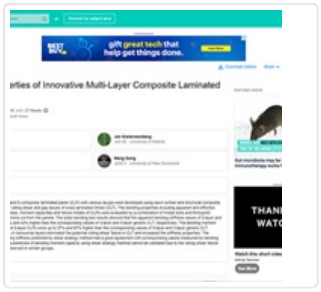
Summary:

Acoustic emission (AE) characteristics of full-hole bolt-bearing testing on structural composite lumbers (SCL) including laminated veneer lumber (LVL) and oriented strand lumber (OSL) were investigated. The main conclusion is that AE cumulative...

Online Access: Free

Resource Link

https://www.researchgate.net/profile/Sheldon_Shi/publication/259801199_Acoustic_emission_of_bolt-bearing_testing_on_structural_composite_lumbers/links/53fb3e4e0cf27c365cf089cb/Acoustic-emission-of-bolt-bearing-testing-on-structural-composite-lumbers.pdf



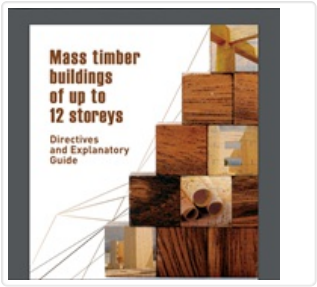
Bending Properties of Innovative Multi-Layer Composite Laminated Panels

https://research.thinkwood.com/en/permalink/catalogue1985

Author:	Zhou, Jianhui
	Niederwestberg, Jan
	Chui, Ying Hei
	Gong, Meng
Year of Publication:	2018
Country of Publication:	South Korea
Format:	Conference Paper
Material:	LSL (Laminated Strand Lumber)
	OSL (Oriented Strand Lumber)
Application:	Beams
Topic:	Mechanical Properties
Keywords:	Bending Stiffness
	Shear Stiffness
	Moment Capacity
	Failure Modes
	Three Point Bending Test
	Modal Test
Language:	English
Conference:	World Conference on Timber Engineering
Research Status:	Complete
Online Access:	Free

Resource Link

https://www.researchgate.net/publication/327732163_Bending_properties_of_Innovative_Multi-Layer_Composite_Laminated_Panels



Directives and Explanatory Guide for Mass Timber Buildings of up to 12 Storeys

https://research.thinkwood.com/en/permalink/catalogue1969

Author:	Veilleux, Lise
	Gagnon, Sylvain
	Dagenais, Christian
Publisher:	Régie du bâtiment du Québec
Year of Publication:	2015
Country of Publication:	Canada
Format:	Book/Guide
Material:	CLT (Cross-Laminated Timber)
	Glulam (Glue-Laminated Timber)
	LSL (Laminated Strand Lumber)
	LVL (Laminated Veneer Lumber)
	OSL (Oriented Strand Lumber)
	PSL (Parallel Strand Lumber)
Application:	Wood Building Systems
Topic:	Design and Systems
	Fire
	Seismic
Keywords:	Tall Wood
	Multi-Storey
	Construction
	Fire Resistance Rating
Language:	English
Research Status:	Complete
ISBN:	978-2-550-74728-4 (printed); 978-2-550-74731-4 (PDF)

Summary:

This document is a translation of the “Bâtiments de construction massive en bois d’au plus 12 étages” Guide published in August 2015. In the event of discrepancies, the French version prevails.

Online Access: Free

Resource Link

http://collections.banq.qc.ca/ark:/52327/bs2553717

Guide for On-site Moisture Management of Wood Construction

https://research.thinkwood.com/en/permalink/catalogue1968

Author:	Wang, Jieying
Organization:	FPInnovations
Publisher:	BC Housing Research Centre
Year of Publication:	2016
Country of Publication:	Canada
Format:	Book/Guide
Material:	CLT (Cross-Laminated Timber)
	Glulam (Glue-Laminated Timber)
	LSL (Laminated Strand Lumber)
	LVL (Laminated Veneer Lumber)
	PSL (Parallel Strand Lumber)
	OSL (Oriented Strand Lumber)
	NLT (Nail-Laminated Timber)
	Light Frame (Lumber+Panels)
Application:	Walls
	Floors
	Wood Building Systems
Topic:	Moisture
Keywords:	Moisture Management
	Construction
	Risk Mitigation
	Prefabrication
	Multi-Storey
Language:	English
Research Status:	Complete

Summary:

Overall moisture management during construction has become increasingly important due to the increase in building height and area, which potentially prolongs the exposure to inclement weather, and the overall increase in speed of construction, which may not allow adequate time for drying to occur. This report provides guidelines and relevant information about on-site moisture management practices that can be adapted to suit a range of wood construction projects...

Online Access: Free

Resource Link

https://www.bchousing.org/research-centre/library/building-science-reports/moisture-management-wood-construction&sortType=sortByDate

Influence of Board Density on the Physical and Mechanical Properties of Bamboo Oriented Strand Lumber

https://research.thinkwood.com/en/permalink/catalogue2512

Author:	Sun, Yuhui
	Zhang, Yahui
	Huang, Yuxiang
	Wei, Xiaoxin
	Yu, Wenji
Publisher:	MDPI
Year of Publication:	2020
Format:	Journal Article
Material:	OSL (Oriented Strand Lumber)
	Other Materials
Application:	Wood Building Systems
Topic:	Design and Systems
	Mechanical Properties
Keywords:	Bamboo
	Density
	Physical Properties
	Microscale Morphology
	BOSL
Language:	English
Research Status:	Complete
Series:	Forests
Online Access:	Free

Resource Link

https://www.mdpi.com/1999-4907/11/5/567

Influence of Layer and Laminate Characteristics on Shear Properties of Cross Laminated Timber and Hybrids

https://research.thinkwood.com/en/permalink/catalogue1543

Author:	Niederwestberg, Jan Chui, Ying Hei Gong, Meng
Year of Publication:	2016
Country of Publication:	Austria
Format:	Conference Paper
Material:	CLT (Cross-Laminated Timber) LSL (Laminated Strand Lumber) OSL (Oriented Strand Lumber)
Application:	Floors
Topic:	Mechanical Properties
Keywords:	Shear Tests Aspect Ratio Growth Ring Orientation Edge-Gluing Static Test Modal Test
Language:	English
Conference:	World Conference on Timber Engineering
Research Status:	Complete
Notes:	August 22-25, 2016, Vienna, Austria p. 1113-1122

Summary:

In-plane shear and planar shear due to out-of-plane bending are important properties for the design of CLT-type floor systems. Properties of CLT-type panels are influenced by the orientation of the layer's major stiffness directions and the properties of their layers...

Online Access: Free

Resource Link

http://hdl.handle.net/20.500.12708/172

Influence of Strand Size, Board Density, and Adhesive Type on Characteristics of Oriented Strand Lumber Boards Manufactured from Pine Strands

https://research.thinkwood.com/en/permalink/catalogue2511

Author:	Mirski, Radoslaw
	Derkowski, Adam
	Dziurka, Dorota
Publisher:	North Carolina State University
Year of Publication:	2019
Country of Publication:	United States
Format:	Journal Article
Material:	OSL (Oriented Strand Lumber)
Application:	Beams
Topic:	Design and Systems
	Mechanical Properties
Keywords:	Pine
	Adhesives
	MUF
	Physical Properties
	Bending Test
	Tensile Strength
	pMDI
Language:	English
Research Status:	Complete
Series:	BioResources
Online Access:	Free

Resource Link

https://ojs.cnr.ncsu.edu/index.php/BioRes/article/view/BioRes_14_3_6686_Mirski_Strand_Size_Board_Density_Adhesive_Type

In-Plane Permeability of Oriented Strand Lumber, Part I: The Effects of Mat Density and Flow Direction

https://research.thinkwood.com/en/permalink/catalogue1466

Author:	Zhang, Chao
	Smith, Gregory
Publisher:	Society of Wood Science and Technology
Year of Publication:	2010
Country of Publication:	United States
Format:	Journal Article
Material:	OSL (Oriented Strand Lumber)
Topic:	General Information
Keywords:	Aspen
	Permeability
	Density
Language:	English
Research Status:	Complete
Series:	Wood and Fiber Science

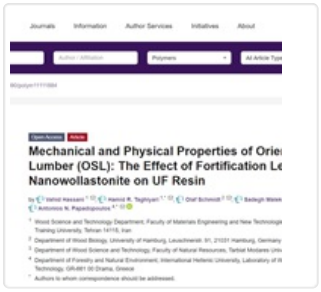
Summary:

The in-plane permeability was measured for thick, unidirectional oriented strand lumber made from aspen (Populus tremuloides) strands and pressed to five different densities. The press cycle was such that the vertical density profile of the panels was uniform...

Online Access: Free

Resource Link

https://wfs.swst.org/index.php/wfs/article/view/2011



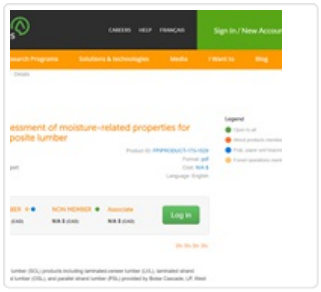
Mechanical and Physical Properties of Oriented Strand Lumber (OSL): The Effect of Fortification Level of Nanowollastonite on UF Resin

https://research.thinkwood.com/en/permalink/catalogue2513

Author:	Hassani, Vahid
	Taghiyari, Hamid
	Schmidt, Olaf
	Maleki, Sadegh
	Papadopoulos, Antonios
Publisher:	MDPI
Year of Publication:	2019
Format:	Journal Article
Material:	OSL (Oriented Strand Lumber)
Application:	Wood Building Systems
Topic:	Design and Systems
	Mechanical Properties
Keywords:	Nanowollastonite
	Physical Properties
	UF Resin
Language:	English
Research Status:	Complete
Series:	Polymers
Online Access:	Free

Resource Link

https://www.mdpi.com/2073-4360/11/11/1884



Preliminary Assessment of Moisture-Related Properties for Structural Composite Lumber

https://research.thinkwood.com/en/permalink/catalogue1175

Author:	Wang, Jieying
Organization:	FPInnovations
Year of Publication:	2018
Country of Publication:	Canada
Format:	Report
Material:	LSL (Laminated Strand Lumber) LVL (Laminated Veneer Lumber) OSL (Oriented Strand Lumber) PSL (Parallel Strand Lumber)
Application:	Wood Building Systems
Topic:	Mechanical Properties Moisture Serviceability
Keywords:	Water Absorption Vapour Permeance Vapour Sorption Dimensional Stability Building Envelope Moisture Management
Language:	English
Research Status:	Complete

Summary:

Fifteen structural composite lumber (SCL) products including laminated-veneer lumber (LVL), laminated strand lumber (LSL), oriented strand lumber (OSL), and parallel strand lumber (PSL) provided by Boise Cascade, LP, West Fraser, and Weyerhaeuser were tested for moisture-related properties in this study, also covering four reference materials: 16-mm Oriented Strand Board (OSB), 19-mm Canadian Softwood Plywood (plywood), 38-mm Douglas-fir and lodgepole pine solid wood. Water absorption, vabour permeance, vapour sorption, and dimensional stability were measured with limited replication by following relevant standards for a purpose of assisting in improving building design and construction, such as hygrothermal modelling of building envelope assemblies, design for vertical differential movement, and on-site moisture management.

Online Access:	Free

Resource Link

https://library.fpinnovations.ca/en/permalink/fpipub49831