Agricultural Buildings With Timber Structure - Preventative Chemical Wood Preservation Inevitably Required?

https://research.thinkwood.com/en/permalink/catalogue1914

Author:	Yuan Jiang
	Philipp Dietsch
	Stefan Winter
Publisher:	Intergrated Digital Conference (INDICO)
Year of Publication:	2018
Country of Publication:	Korea
Format:	Conference Paper
Material:	Timber (unspecified)
Application:	Wood Building Systems
	General Application
Topic:	Moisture
Keywords:	Moisture Content
	Spruce
	Agriculture
Language:	English
Conference:	World Conference on Timber Engineering
Research Status:	Complete
Notes:	August 20-23,2018. Seoul, Republic of Korea
Online Access:	Free

Resource Link

https://indico.conference4me.psnc.pl/event/171/session/343/contribution/116/material/paper/1.pdf

Assessing the Integrity of Glued-Laminated Timber Elements

https://research.thinkwood.com/en/permalink/catalogue239

Author:	Philipp Dietsch
	Thomas Tannert
Publisher:	ScienceDirect
Year of Publication:	2015
Country of Publication:	Netherlands
Format:	Journal Article
Material:	Glulam (Glue-Laminated Timber)
Application:	General Application
Topic:	Serviceability
Keywords:	Cracks
	Damage
	Moisture
	Structural analysis
Language:	English
Research Status:	Complete
Series:	Construction and Building Materials
Online Access:	Free

Resource Link

https://mediatum.ub.tum.de/doc/1355295/1355295.pdf

Building Climate – Long-Term Measurements to Determine the Effect on the Moisture Gradient in Timber Structures

https://research.thinkwood.com/en/permalink/catalogue266

Author:	Andreas Gamper
	Philipp Dietsch
	Michael Merk
Organization:	Technical University of Munich
Year of Publication:	2014
Country of Publication:	Germany
Format:	Report
Material:	Glulam (Glue-Laminated Timber)
Application:	Wood Building Systems
Topic:	Serviceability
	Moisture
Keywords:	Moisture Gradients
	Climate
	Load Carrying
Language:	English
Research Status:	Complete
Online Access:	Free

Resource Link

https://www.irbnet.de/daten/kbf/kbf_e_F_2962.pdf

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 Dröscher
	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
Research Status:	Complete
Series:	Construction and Building Materials
Online Access:	Payment Required

Resource Link

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

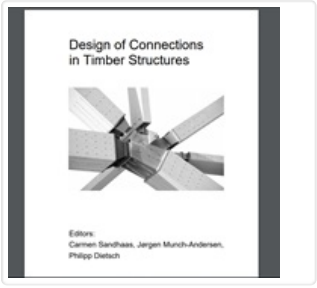
Design Concept for CLT - Reinforced with Self-Tapping Screws

https://research.thinkwood.com/en/permalink/catalogue1486

Author:	Peter Mestek
	Philipp Dietsch
Organization:	Technical University of Munich
Year of Publication:	2014
Country of Publication:	Germany
Format:	Report
Material:	CLT (Cross-Laminated Timber)
Application:	General Application
Topic:	Mechanical Properties
	Design and Systems
Keywords:	Self-Tapping Screws
	Shear Stress
	Rolling Shear Stress
Language:	English
Research Status:	Complete
Online Access:	Free

Resource Link

https://www.hb.bgu.tum.de/fileadmin/w00bpc/www/02_Team/Dietsch/Mestek__P.__Dietsch__P.__Design_concept_for_CLT_-_reinforced_with_self-tapping_screws.pdf



Design of Connections in Timber Structures

https://research.thinkwood.com/en/permalink/catalogue1937

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	Eero Tuhkanen
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Editor:	Carmen Sandhaas
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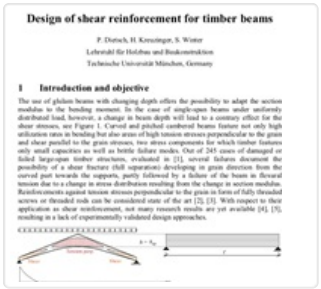
	Philipp Dietsch
Publisher:	COST (European Cooperation in Science and Technology)
Year of Publication:	2018
Country of Publication:	Germany
Format:	Book
Material:	Timber (unspecified)
	CLT (Cross-Laminated Timber)
Application:	General Application
Topic:	Connections
	Design and Systems

Keywords:	Eurocode 5 Fasteners Screws Dowel Type Fastener Glued-In Rods Numerical Modeling Europe Load Distribution
Language:	English
Research Status:	Complete
ISBN:	978-3-8440-6144-4
ISSN:	0945-067X
Online Access:	Free

Resource Link

https://www.cost.eu/wp-content/uploads/2018/11/Design-of-Connections-in-Timber-Structures.pdf


Design of shear reinforcement for timber beams

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1 Introduction and objective

The use of glulam beams with changing depth offers the possibility to adapt the section modulus to the bending moment. In the case of single-span beams under uniformly distributed load, however, a change in beam depth will lead to a contrary effect for the shear stresses, see Figure 1. Curved and pitched cambered beams feature not only high utilization rates in bending but also areas of high tension stresses perpendicular to the grain and shear parallel to the grain stresses, two stress components for which timber features only small capacities as well as brittle failure modes. Out of 245 cases of damaged or failed large-span timber structures, evaluated in [1], several failures document the possibility of a shear fracture (full separation) developing in grain direction from the curved part towards the supports, partly followed by a failure of the beam in flexural tension due to a change in stress distribution resulting from the change in section modulus. Reinforcements against tension stresses perpendicular to the grain in form of fully threaded screws or threaded rods can be considered state of the art [2], [3]. With respect to their application as shear reinforcement, not many research results are yet available [4], [5], resulting in a lack of experimentally validated design approaches.

Design of Shear Reinforcement for Timber Beams

https://research.thinkwood.com/en/permalink/catalogue1109

Author:	Philipp Dietsch
	Heinrich Kreuzinger
	Stefan Winter
Year of Publication:	2013
Country of Publication:	Germany
Format:	Conference Paper
Material:	Glulam (Glue-Laminated Timber)
Application:	Beams
Topic:	Connections
	Design and Systems
Keywords:	Shear
	Reinforcement
	Fractured
	Unfractured
Language:	English
Conference:	CIB-W18 Meeting
Research Status:	Complete
Notes:	August 26-29, 2013, Vancouver, Canada p.193-209
Online Access:	Free

Resource Link

http://cib-w18.com/sites/default/files/proceedings/no._46_vancouver_canada_august_2013.pdf

Effects of Changes in Moisture Content in Reinforced Glulam Beams

https://research.thinkwood.com/en/permalink/catalogue1173

Author:	Philipp Dietsch
	Heinrich Kreuzinger
	Stefan Winter
Year of Publication:	2014
Country of Publication:	Canada
Format:	Conference Paper
Material:	Glulam (Glue-Laminated Timber)
Application:	General Application
Topic:	Moisture
	Mechanical Properties
Keywords:	Reinforcement
	Threaded Rods
	Moisture Induced Stresses
	Finite Element Method
	Moisture Content
Language:	English
Conference:	World Conference on Timber Engineering
Research Status:	Complete
Notes:	August 10-14, 2014, Quebec City, Canada
Online Access:	Free

Resource Link

https://mediatum.ub.tum.de/doc/1198443/1198443.pdf/

Monitoring Building Climate and Timber Moisture Gradient in Large-Span Timber Structures

https://research.thinkwood.com/en/permalink/catalogue108

Author:	Andreas Gamper Philipp Dietsch Stefan Winter
Editor:	Bettina Franke Steffen Franke
Year of Publication:	2014
Country of Publication:	Switzerland
Format:	Conference Paper
Material:	Glulam (Glue-Laminated Timber)
Application:	Wood Building Systems
Topic:	Serviceability Moisture
Keywords:	Cracks Damage Equilibrium Moisture Content Internal Climate Lamellas Large Span Long-term Relative Humidity Shrinkage Swelling Temperature
Language:	English
Conference:	COST Workshop – Highly Performing Timber Structures: Reliability, Assessment, Monitoring and Strengthening
Research Status:	Complete
ISSN:	2190-5479
Online Access:	Free

Resource Link

https://www.researchgate.net/profile/Steffen_Franke2/publication/312198355_COST_Workshop_-_Highly_Performing_Timber_Structures_Reliability_Assessment_Monitoring_and_Strengthening/links/58760dea08ae6eb871cf3034/COST-Workshop-Highly-Performing-Timber-Structures-Reliability-Assessment-Monitoring-and-Strengthening.pdf#page=75

Reinforcement of Round Holes in Glulam Beams Arranged Eccentrically or in Groups

https://research.thinkwood.com/en/permalink/catalogue1627

Author:	Martin Danzer
	Philipp Dietsch
	Stefan Winter

Year of Publication:	2016
Country of Publication:	Austria
Format:	Conference Paper
Material:	Glulam (Glue-Laminated Timber)
Application:	Beams
Topic:	Mechanical Properties
Keywords:	Holes
	Self-Tapping Screws
	Load Bearing Capacity
Language:	English
Conference:	World Conference on Timber Engineering
Research Status:	Complete
Notes:	August 22-25, 2016, Vienna, Austria p. 2804-2812

Abstract:

Experimental and numerical investigations on round holes in glulam beams are presented. These were conducted in order to extend the field of practical application, to study the structural behaviour of holes arranged eccentrically or in groups and to generate basic results for deriving a design format. Within these investigations the...

Online Access: Free

Resource Link

http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1648952