



Lateral Testing of Glued Laminated Timber Tudor Arch

<https://research.thinkwood.com/en/permalink/catalogue1722>

Author: Douglas Rammer
Philip Line

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Arches

Topic: Seismic
Mechanical Properties

Keywords: Full Scale
Lateral Load
Damping
Deformation
Failure Modes

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 4638-4646

Abstract:

Glued laminated timber Tudor arches have been in wide use in the United States since the 1930s, but detailed knowledge related to seismic design in modern U.S. building codes is lacking. FEMA P-695 (P-695) is a methodology to determine seismic performance factors for a seismic force resisting system. A limited P-695 study for...

Online Access: Free

Resource Link

<https://www.fs.usda.gov/treesearch/pubs/53725>



Seismic Analysis of Three-Hinge Glulam Tudor Arches Using the FEMA P-695 Methodology

<https://research.thinkwood.com/en/permalink/catalogue693>

Author: Finley Charney
Jonathan Eberle
Philip Line
Vladimir Kochkin

Year of Publication: 2014

Country of Publication: Canada

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Arches

Topic: Seismic

Keywords: Maximum Considered Earthquake
Seismic Response Modification Factor

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

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

Abstract:

This paper discusses the determination of the ASCE 7 seismic response modification factor R for three-hinge glulam Tudor arches. In an attempt to meet this objective, a limited application of the methods and procedures outlined in FEMA P-695 were used to...

Online Access: Free

Resource Link

http://schr.ws/hosted_files/wcte2014/34/ABS437_Charney_web.pdf



Structural Performance of the Second Oldest Glued-Laminated Structure in the United States

<https://research.thinkwood.com/en/permalink/catalogue1118>

Author: Douglas Rammer
Jorge de Melo Moura
Robert Ross

Organization: Structures Congress

Publisher: American Society of Civil Engineers

Year of Publication: 2014

Country of Publication: United States

Format: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Arches

Topic: Serviceability

Keywords: Uniform Loading
Deformation

Language: English

Conference: Structures Congress 2014

Research Status: Complete

Notes: April 3-5, 2014, Boston, Massachusetts, United States

Abstract:

The second glued-laminated structure built in the United States was constructed at the USDA Forest Products Laboratory (FPL) in 1934 to demonstrate the performance of wooden arch buildings. After 75 years of use, the structure was decommissioned in 2010...

Online Access: Payment Required

Resource Link

<https://doi.org/10.1061/9780784413357.111> 