



Advanced Wood-Based Solutions for Mid-Rise and High-Rise Construction: In-Situ Testing of the Origine 13-Storey Building for Vibration and Acoustic Performances

<https://research.thinkwood.com/en/permalink/catalogue1474>

Author: Lin Hu
Samuel Cuerrier-Auclair

Organization: FPInnovations

Year of Publication: 2018

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)

Application: Wood Building Systems
Floors
Walls

Topic: Acoustics and Vibration
Serviceability

Keywords: Origine
Natural Frequencies
Damping Ratios
Sound Insulation
Ambient Vibration Tests
Static Deflection
Apparent Sound Transmission Class
Apparent Impact Insulation Class

Language: English

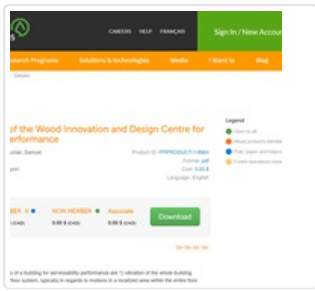
Abstract:

Serviceability performance studied covers three different performance attributes of a building. These attributes are 1) vibration of the whole building structure, 2) vibration of the floor system, typically in regards to motions in a localized area within the entire floor plate, and 3) sound insulation performance of the wall and floor assemblies...

Online Access: Payment Required

Resource Link

https://fpinnovations.ca/Extranet/Pages/AssetDetails.aspx?item=/Extranet/Assets/ResearchReportsWP/16795.pdf#.Wz0Cq_IKiUI



In-Situ Testing of the Wood Innovation and Design Centre for Serviceability Performance

<https://research.thinkwood.com/en/permalink/catalogue1183>

Author: Lin Hu
Samuel Cuerrier-Auclair

Organization: FPInnovations

Year of Publication: 2018

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)

Application: Wood Building Systems

Topic: Serviceability
Acoustics and Vibration

Keywords: Vibration Performance
Sound Insulation
Natural Frequencies
Damping Ratios
Ambient Vibration Testing
Apparent Sound Transmission Class
Apparent Impact Insulation Class

Language: English

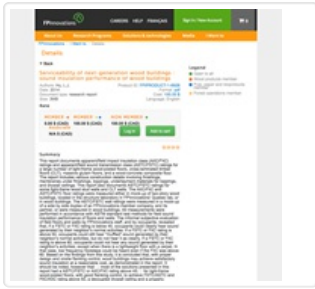
Abstract:

Three performance attributes of a building for serviceability performance are 1) vibration of the whole building structure, 2) vibration of the floor system, typically in regards to motions in a localized area within the entire floor plate, and 3) sound insulation performance of the wall and floor assemblies...

Online Access: Free

Resource Link

<https://fpinnovations.ca/Extranet/Pages/AssetDetails.aspx?item=/Extranet/Assets/ResearchReportsWP/16783.pdf#.WymNAflKiUI>



Serviceability of Next-Generation Wood Buildings: Sound Insulation Performance of Wood Buildings

<https://research.thinkwood.com/en/permalink/catalogue402>

Author: Lin Hu
Organization: FPI Innovations
Year of Publication: 2014
Country of Publication: Canada
Format: Report
Material: CLT (Cross-Laminated Timber)
Glulam (Glue-Laminated Timber)
Timber-Concrete Composite
Light Frame (Lumber+Panels)
Application: Wood Building Systems
Floors
Walls
Topic: Acoustics and Vibration
Serviceability
Keywords: Apparent Sound Insulation Class
Field Sound Insulation Class
Apparently Sound Transmission Class
Field Sound Transmission Class
Language: English

Abstract:

This report documents apparent/field impact insulation class (AIIIC/FIIC) ratings and apparent/field sound transmission class (ASTC/FSTC) ratings for a large number of light-frame wood-joisted floors, cross-laminated timber floors (CLT), massive glulam floors, and a wood-concrete composite floor...

Online Access: Payment Required

Resource Link

<https://fpinnovations.ca/Extranet/Pages/AssetDetails.aspx?item=/Extranet/Assets/ResearchReportsWP/E4874.pdf>