

# Accepted Manuscript

Elastic properties of full-size mass timber panels: Characterization using modal testing and comparison with model predictions

Jianhui Zhou, Ying Hei Chui, Meng Gong, Lin Hu



PII: S1359-8368(16)31592-X

DOI: [10.1016/j.compositesb.2016.12.027](https://doi.org/10.1016/j.compositesb.2016.12.027)

Reference: JCOMB 4782

To appear in: *Composites Part B*

Received Date: 11 August 2016

Revised Date: 9 December 2016

Accepted Date: 10 December 2016

Please cite this article as: Zhou J, Chui YH, Gong M, Hu L, Elastic properties of full-size mass timber panels: Characterization using modal testing and comparison with model predictions, *Composites Part B* (2017), doi: [10.1016/j.compositesb.2016.12.027](https://doi.org/10.1016/j.compositesb.2016.12.027).

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1 **Elastic properties of full-size mass timber panels: Characterization using**  
2 **modal testing and comparison with model predictions**

3 Jianhui Zhou<sup>1,\*</sup>, Ying Hei Chui<sup>1</sup>, Meng Gong<sup>1</sup>, Lin Hu<sup>2</sup>

4 <sup>1</sup>, Faculty of Forestry and Environmental Management & Wood Science and Technology  
5 Centre, University of New Brunswick, 28 Dineen Drive, Fredericton, NB, Canada, E3B  
6 5A3

7 <sup>2</sup> Advanced Building Systems, FPInnovations, 319 Franquet, Québec City, QC, Canada  
8 G1P 4R4T

9 <sup>\*</sup>, Corresponding author, Email Address: jh.zhou@unb.ca.

10 **Keywords:** Mass timber panels; Modal testing; A. Wood; B. Mechanical properties; D.  
11 Non-destructive testing

12  
13 **1. Introduction**

14 With the advent of mass timber panels, the trend of mass timber construction is  
15 spreading throughout the world in recent years. Mass timber construction is a category of  
16 framing styles using heavy timber products including cross laminated timber (CLT), nailed  
17 laminated timber (NLT), structural composite lumber (SCL) or glued-laminated timber  
18 (GLT) panels. Panel-type products such as CLT, NLT, SCL and GLT are example of mass  
19 timber panels. Due to the outstanding machinability of wood, mass timber panels intended  
20 for floor, wall and roof construction can be prefabricated with precise dimensions and  
21 openings in a factory, thereby allowing for a faster construction process and minimal

Download English Version:

<https://daneshyari.com/en/article/5021439>

Download Persian Version:

<https://daneshyari.com/article/5021439>

[Daneshyari.com](https://daneshyari.com)