

Higher value for MPB wood with the right connections

FORESTRY INNOVATION INVESTMENT

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Researchers have completed the modeling phase of a research project to investigate production of thick laminated wood plates using mountain pine beetle-killed wood.

Thick laminated wood plates are high-value structural wood products made by putting several pieces of lower-grade wood together side-by-side, and then fastening the resulting "plates" to each other in layers. The University of British Columbia study used several configurations of three-, five- and six-layer cross-laminated plates. The individual plates consisted of various series of 2x4 lumber.

Researchers started looking at the possibilities of thick laminated wood plates in 2005 because such a product could use short

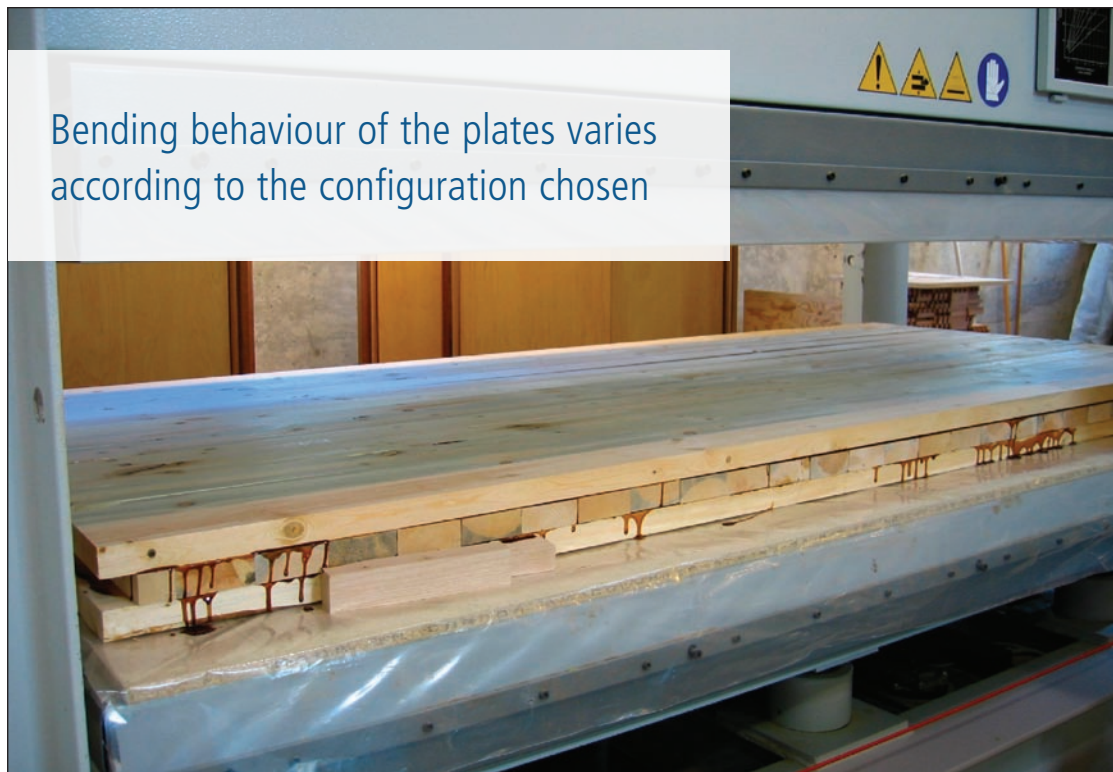
lengths from beetle-killed wood rejects in the lumber mill, making use of a large amount of beetle-killed wood that is usually chipped or used in low quality non-structural applications.

Thick laminated wood plates have found a market in Europe as part of structural systems for flooring, walls and roofs. Such systems are considered well suited for the low-rise commercial, industrial and multi-family residential building market.

In the second year of the project, researchers focused on developing a model to predict the strength and stiffness properties of the various configurations of plate, and also manufactured some specimens based on this modeling in the UBC lab.



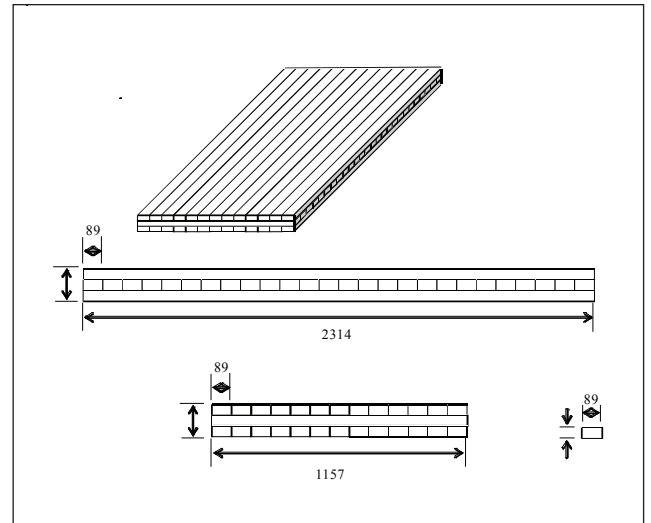
Bending behaviour of the plates varies according to the configuration chosen



Uppdale
MOUNTAIN PINE BEETLE

Modeling was completed for nailed or glued layers, as well as varying numbers of layers and plates that had areas removed for utility installation. Some of the conclusions are that nailed plates are more flexible and develop greater deflections compared to glued plates of the same dimensions. The specific nailing pattern also proved to be important to the performance of nailed plates.

Bending behavior of the plates varies according to the configuration chosen, and, not surprisingly, deflection decreases as thickness increases. Details of these results and more are available in the Year Two report.



FOR THE FULL REPORT GO TO WWW.BCFII.CA/MPB/
AND DOWNLOAD THE REPORT "MPB-07-020A:
DEVELOPMENT OF THICK LAMINATED MPB
WOOD PLATES: YEAR TWO REPORT."



Forestry Innovation Investment is a British Columbia government corporation investing in initiatives to help market BC forest products and promotes our sustainable forest practices to the world. FII's Mountain Pine Beetle Program supports the government's Mountain Pine Beetle Action Plan and its objective to maximize the economic value of mountain pine beetle wood. FII does this through marketing activities and research into new products and manufacturing processes for mountain pine beetle wood.

For more information, go to www.bcfii.ca or contact

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