



Development of Cross-Laminated Timber (CLT) Products from Stress Graded Canadian Hem-Fir

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Summary:

To explore the feasibility of hem-fir for CLT products, this work addressed the exploratory and pilot plant studies of hem-fir cross-laminated timber (CLT) products through mechanical tests. The hem-fir lumber was procured and then stress-graded based on dynamic modulus of elasticity (MOE). The resulted 5-ply prototype CLT products were then tested non-destructively and 3-ply pilot plant hem-fir CLT was tested destructively. The results showed that bending performance of hem-fir CLT panel can be predicted. Considering cost-competitiveness and end applications of hem-fir CLT products, the panel structure can be optimized based on the stress-graded data of hem-fir lumber.

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Resource Link

https://www.researchgate.net/profile/Peixing_Wei/publication/341621044_DEVELOPMENT_OF_CROSS-LAMINATED_TIMBER_CLT_PRODUCTS_FROM_STRESS_GRADED_CANADIAN_HEM-FIR/links/5ededb91a6fdcc4768909b81/DEVELOPMENT-OF-CROSS-LAMINATED-TIMBER-CLT-PRODUCTS-FROM-STRESS-GRADED-CANADIAN-HEM-FIR.pdf