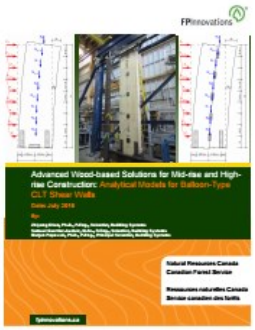

Advanced wood-based solutions for mid-rise and high-rise construction: analytical models for balloon-type CLT shear walls

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Abstract: Lack of research and design information for the seismic performance of balloon-type CLT shear walls prevents CLT from being used as an acceptable solution to resist seismic loads in balloon-type mass-timber buildings. To quantify the performance of balloon-type CLT structures subjected to lateral loads and create the research background for future code implementation of balloon-type CLT systems in CSA O86 and NBCC, FPInnovations initiated a project to determine the behaviour of balloon-type CLT construction. A series of tests on balloon-type CLT walls and connections used in these walls were conducted. Analytical models were developed based on engineering principles and basic mechanics to predict the deflection and resistance of the balloon-type CLT shear walls. This report covers the work related to development of the analytical models and the tests on balloon-type CLT walls that the models were verified against.

Documents