



# ESTIMATION OF STRENGTH DEGRADATION OF WOODEN HOUSES BY AGED DETERIORATION AND SEISMIC DESIGN CODE USING FRAGILITY CURVES CLASSIFIED BY AGE

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**ABSTRACT:** We estimated aged deterioration and strength difference by the seismic design code revision of wooden houses using fragility curves classified by age. First, we calculated strength distribution in each age by seismic response analyses using a wooden house cluster model, and we got relation between age and a base shear coefficient. Next, we separated relations between age and a base shear coefficient to the aged deterioration and seismic design model. We found that strength degraded 30~40% for 30 years by aged deterioration, but after that it became constant and that revision of seismic design code in 1981 made about 20~30% difference, whereas revision in 1959 had almost no influence.

**Key Words:** Fragility curves classified by age, strength distribution, Aged deterioration, Seismic design code