



VULNERABILITY FUNCTIONS OF BUILDINGS BASED ON DAMAGE SURVEY DATA OF EARTHQUAKES AFTER THE 1995 KOBE EARTHQUAKE

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ABSTRACT: Vulnerability functions of buildings are examined based on the damage survey data in seven earthquakes occurred in 2003 to 2008. The building damage ratios show lower correlation with peak acceleration, but higher correlation with instrumental seismic intensity or peak velocity. The obtained vulnerability functions, in comparison with the previous ones based on the data in the 1995 Kobe earthquake, are that 1) the damage ratios increase more rapidly with increase of ground motion intensity, 2) the damage ratios are lower at the same intensity level and 3) the difference of the functions for older and newer buildings is smaller.

Key Words: Building Damage, Vulnerability Function, Instrumental Seismic Intensity, Peak Velocity, Peak Acceleration