

عنوان مقاله:

3D-Panel Pre-Fabricated System Using Shaking Table Study of Seismic Performance of Building Constructed In

محل انتشار:

اولین همایش بین المللی مقاوم سازی لرزه ای (سال: 1385)

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خلاصه مقاله:

3D-panel system building is carried out under In present investigation, a full-scale dynamic test of a prefabricated several ground motions. Shaking table tests have many advantageous such as studying the seismic damage mechanics and evaluating of the seismic capacity, studying the distribution of seismic forces, finding out the weak points in the structures and verifying the dynamic analytical models for the new structural systems. Objectives of the study are to obtain seismic performances of the described structural system under dynamic loading, such as linear and non-linear structural characteristics, deformability, stiffness degradation and failure mechanism. In linear analysis, the primary frequencies, vibration modes and comparison of the results obtained from the test and numerical analysis are presented. In addition, the lateral deformation, story drift, torsion of system, is measured experimentally and calculated numerically in time domain and are compared with each other. Accelerometers are mounted to measure 3D-panel system, due to its high accelerations in both orthogonal horizontal directions. The results indicate that the rigidity, can resist mainly in linear domain and has adequate load bearing potential against seismic excitation. However, in nonlinear region, where the initial cracks are appeared at the opening locations, foundation connection to the table and non-enhanced connections, the system becomes more ductile and the small columns provided at the .corners help the building to resist in absorbing of dditional energy

کلمات کلیدی:

3D panel, finite element ,shaking table, dynamic analysis

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