عنوان مقاله:

SEISMIC EVALUATION OF REINFORCED CONCRETE SHEAR WALLS CONSIDERING SOIL-STRUCTURE INTERACTION

محل انتشار:

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خلاصه مقاله:

The use of concrete shear wall is quite common in a number of seismic countries as a result of their successful seismic behavior during past severe earthquakes. As the Iranian seismic code does not address the soil–structure interaction (SSI) explicitly, the effects of SSI on reinforced concrete shear walls are studied using the sub-structure method. Two types of slender (H/L>2) and squat (H/L<2) walls on three types of soil, with and without the soil interaction, are modelled and subjected to different earthquake records. The walls and supports are modelled using finite element method (FEM). The FEM calculations are carried out using the program ABAQUS. The results showed that soil-structure interaction has negligible effect on maximum displacement of both squat and slender walls; however, considering SSI for seismic design of the squat wall is essential.

کلمات کلیدی:

Squat Wall, Soil-Structure Interaction, FEM, Sub-Structure Method