

عنوان مقاله:

THE EFFECT OF INHOMOGENEITY ON SEISMIC SOIL DEPOSIT RESPONSE: A REVIEW

محل انتشار:

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خلاصه مقاله:

By observations made after devastating earthquakes, it has long been recognized that the intensity and distribution of structural damage is primarily dependent on dynamic characteristics of the underlying soil deposits. Hence, a proper understanding of dynamic response characteristics enables civil engineers to design wisely and to mitigate seismic hazard consequences. For this reason, in this paper a review of the results of previous studies in terms of the effect of inhomogeneity, continuous variation of shear modulus or shear wave velocity with depth in a soil layer, on natural periods, mode shapes, and amplification functions of soil profiles subjected to shear wave propagation is carried out. In this context, the considerable influence of inhomogeneity especially on the response of higher modes in different heterogeneous profiles and the performance of conventional analysis which is based on discretizing the soil profile into a multi-layer system with constant properties in each layer, or homogeneous layers, is discussed

کلمات کلیدی:

Inhomogeneous soil deposit, Natural frequencies, Mode shapes, Amplification function, Shear wave velocity

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