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Site Specific Ground Response Analysis of Peshawar, Pakistan

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The study discusses the site-specific ground response analysis at a selected location in Peshawar University. The ground is modelled in one dimensional ground response analysis software DeepSoil using the standard penetration test results data. Based on the average shear wave velocity the site is stiff SD according to building codes of Pakistan. The input ground motion applied at the base of ground model is selected compatible to the seismic hazard of Peshawar. The soil non-linearity is modelled using shear modulus degradation and damping curves. The surface response spectrum shows overestimate at short frequency and underestimates at high frequency in comparison to design response spectrum of Peshawar.

Keywords: Ground response analysis, Deepsoil, Peshawar, Response spectrum

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