

Cyclic Liquefaction Resistance of Reinforced Sand

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Abstract : Liquefaction phenomenon in sand is nowadays a classical soil mechanics subject. Using a cyclic triaxial test apparatus, we use non-woven geotextile reinforcement to improve the liquefaction resistance of sand. The layer configurations used are zero, one, two and three horizontal reinforcing layers in a triaxial test sample. The influences of the number of geotextile layers, and cyclic stress ratio (CSR) were studied and described. The results illustrated that the geotextile inclusion increases liquefaction resistance.

Keywords : liquefaction resistance, geotextile, sand, cyclic triaxial test, cyclic stress ratio

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