

عنوان مقاله:

Liquefaction potential of clean and silty sand

محل انتشار:

هفتمین کنگره ملی مهندسی عمران (سال: 1392)

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خلاصه مقاله:

Soil liquefaction is one of the most interesting and complex phenomena studied in geotechnical earthquake engineering. The liquefaction resistance of a saturated fine to medium sand mixed with varying amounts of non-plastic fines was evaluated by laboratory cyclic triaxial tests at same relative densities and a constant confining pressure. The test results were used to conclude on the effect of low non-plastic contents (0 to 20%) and grading characteristics on the liquefaction resistance of the sand. The test results indicate that the undrained residual strength reduced with the increase of non-plastic fine content. Also, shear strength of gap graded sand mixed with low non-plastic fine content increases with decrease in effective size (D50). In other words, in this state, we can use the D50 as a parameter to control of silty sand's undrained resistance. Besides, the undrained residual strength of pour sand specimens with same effective size increases due to increase of coefficient of uniformity (Cu

کلمات کلیدی:

Liquefaction, Silty sand, Shear resistance, Grading characteristics, effective size

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