عنوان مقاله:

Influence of waste tire chips on steady state behavior of sand

محل انتشار:

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خلاصه مقاله:

Materials such as waste tire chips were widely used to improve the strength of soil. The objective of this study is to discuss the residual strength or steady-state behavior of sand-waste tire chip mixtures. A series of undrained monotonic triaxial compression tests were conducted on reconstituted saturated specimens of sand and sand-tire chip mixtures with variation in the tire-chip contents from ۰ to ۴ percentages by dry weight of soil. The specimens are prepared using dry deposition method of preparation. The influence on residual resistance of varying confining pressure (۱۰۰, ۲۰۰, and ۳۰۰ kPa) and sand mixture relative density (۴۰, ۶۵, and ۸۰%) were evaluated. Tests results showed that by increasing the tire chip contents, the residual strength increased and steady-state lines move to the right of log Sus-e diagram. Also, the residual resistance improvement induced by tire chip inclusions was found to be sensitive to the relative density of samples and applied confining pressure.

کلمات کلیدی:

Steady-state strength, Waste tire chips, triaxial test, Sand, Relative density, Confining pressure.