

عنوان مقاله:

Effect of Recycled Waste Tire Cords on Engineering Properties of Silty Sand Soils

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خلاصه مقاله:

With the reduction of available land resources, more and more construction of civil engineering structures is carried out over weak or soft soil, which leads to the establishment and development of various ground improvement techniques such as soil stabilization and reinforcement. Several reinforcement methods are available for stabilizing expansive soils. These methods comprise stabilization with chemical additives, rewetting, soil replacement, compaction control, moisture control, surcharge loading, and thermal methods. Recently; for a second time, one of the early methods has been introduced to civil projects, i.e. random fibre reinforcement. However, very limited information has been reported on the use of randomly distributed discrete fibres for soil reinforcement. In this paper, a novel method of soil reinforcement using a mixture of Recycled Waste Tire Cords, RWTCs with Poly Vinyl Acetate, PVAc, was introduced. PVAc was chosen from our previous work. Thus it had been found that PVAc would be a suitable binder of soil projects. Consequently, it was derived that the cumulative effect of fibres and PVAc performance leads to obtain 800%-1000% increase in compressive strength of modified soil samples. Accordingly, it appears that soil projects would be a suitable candidate to leave RWTCs

کلمات کلیدی:

Soil Stabilization, Soil Reinforcement, Recycled Waste Tire Cords, Poly Vinyl Acetate

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