

عنوان مقاله:

An Experimental Study on the Effect of Tire Powder on the Geotechnical Properties of Clay Soils

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خلاصه مقاله:

With respect to the increasing production of tire wastes, the use of these wastes as an additive in civil engineering has always gained attentions of researchers due to their positive effects on material properties and reduction of environmental problems. Clay soils, as problematic soils, have always caused geotechnical problems including high Atterberg limits and consequently low workability. Tire powder, as one of the products of tire wastes, lacks clay cohesion and it can be effective in altering the plasticity of clay soils. As no comprehensive study has been conducted in this regard specifically on Tehran clay soil yet, this research studies experimentally the effect of adding different percentages of tire powder to clay soil at the Atterberg limits of clay soils with two different types of plasticity. More over according to previous studies, the effect of tire powder on other geotechnical properties of clay soils and the advantages and disadvantages of using tire powder in clay soils are discussed. The results indicate that addition of tire powder to clay soils has positive effects on reducing the Atterberg limits, increasing efficiency, and improving resistance, permeability, swelling reduction, and settlement properties, and reducing soil density and it can be used as an additive in improving clay soils.

کلمات کلیدی:

Tehran Clay; Waste Tire; Atterberg Limits; Geotechnical Properties

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