

عنوان مقاله:

Physical Characteristics of fine Soil Stabilized with Marble Industry Waste

محل انتشار:

هفتمین کنگره بین المللی مهندسی عمران (سال: 1385)

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خلاصه مقاله:

Impervious dam cores employing clayey soils possess very low shear strength under wet conditions. Marble industry waste has been successfully and economically used to stabilize soil for the dam cores. Marble industry is producing substantial amount of waste with fairly good engineering characteristics. In this study, very fine powdered marble waste produced during cutting and grinding of the marble in marble industry has been added to the soil to reduce the permeability of the dam cores. The addition of very fine marble powder alters the gradation and the plasticity characteristics of the soil. This results in improvement in the density and strength and at the same time reduction in the permeability of the stabilized soil. The life time behavior of the stabilized soil with respect to varying moisture conditions is also very much improved. Samples with varying percentages of powdered marble waste mixed with the soil were prepared. The permeability of samples of samples compacted at the optimum moisture content was checked. A reasonable decrease in the permeability values was obtained due to the addition of marble waste along with a fairly good improvement in the strength properties. The method will prove economical due to reduction in the size of the dam cores.

کلمات کلیدی:

powdered merble industry waste, Reciprocating cutter, Colloidal fraction

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