سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

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بعض الوثائق الأصلية تالفة

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بالرسالة صفحات لم ترد بالأصل

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STUDY OF SHEAR STRENGTH AND PERMEABILITY OF CHEMICALLY TREATED COHESIONLESS SOILS

BY

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ABSTRACT

The aim of this research is to study some of the of the physical properties of cohesionless soils treated with organic and inorganic chemical additives added by weight of treated soil through a laboratory testing program carried out on 35 mm diameter cylindrical samples 50 - 80 mm long, using triaxial and unconfined compressive strength testing apparatus. The variables studied in this research program were:

For organic additives:

. Monomer content in the mix.

. Initiator content in the mix.

. Mixing water content.

. Hydrochloric acid content in the mix.

For inorganic additives:

. Salt content in the mix.

. Water glass content in the mix.

. Mixing water content.

. Hydrochloric acid content in the mix.

The research also looked at the effect of different environments on the shear strength. These environments were:

. Time effect

. Temperature effect.

. Submergence in water effect.

From the obtained results for inorganic additives, it was concluded that the increase of both the salt content and

strength and permeability. On the other hand, as the hydrochloric acid content and water content increase, the shear strength and permeability decrease.

The same observations were recorded with respect to organic additive, where the shear strength increases with the monomer (urea) content increase. The initiator (ammonium chloride) content has an optimal content at which the shear strength reaches a maximum; any further increase above this initiator content reduces the strength.

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