شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HANAA ALY

"Evaluation of Green Roller Compacted Concrete Behavior in Rigid Pavement for Roads"

By

Ibrahim Sobhy Khalil Ibrahim

A Thesis Submitted to the
Faculty of Engineering at Cairo University
In Partial Fulfillment of the
Requirements for The degree of
DOCTOR OF PHILOSOPHY
in
Structural Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Under the Supervision Of

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Title of Thesis:

"Evaluation of Green Roller Compacted Concrete Behavior in Rigid Pavement for Roads"

Key Words:
Rigid Pavement; Roads; Green Concrete; Local Byproduct; Nano Materials

Summary:

The main objective is to study the effect of using local byproduct pozzolanic and local available nano materials, and two types of fibers on the roller compacted concrete (RCC) with investigate the different properties and structure behavior of the (RCC) pavement slab, with and without fibers under three load cases (center, edge and corner) were rested on four types of subgrade (K0, K1, K2 and K3). Results shows an improvement for all tested parameters with using byproduct materials, more improvement when using nano-materials and best results were use both, with added 1% polypropylene fibers.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Date: ../../ 2020

Signature:

Dedication

This work is dedicated to my mother, my family, prof. Osama A. Hodhod, prof. Zeinab Salah, prof. Hosam Seleem, prof. Ahmed M. Ragab and every one give me a hand and support.

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