سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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سامية محمد مصطفى

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

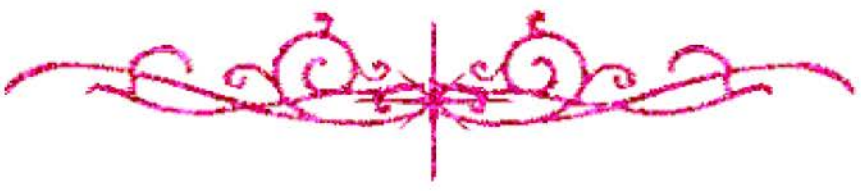
يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

سامية محمد مصطفى

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة



سامية محمد مصطفى

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بالرسالة صفحات لم ترد بالأصل

Menoufia University
Faculty of Engineering
Civil Engineering Dept.

FIBER REINFORCED CONCRETE

By

METWALLY ABD ALLAH ABD EL-ATY MOHAMED

B.Sc. (Honors) 1991 , Civil Eng. Dept.

Menoufia University

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT
FOR THE REQUIREMENTS OF THE DEGREE
OF MASTER OF SCIENCE IN ENGINEERING

(STRUCTURAL ENGINEERING - STRENGTH
AND TESTING OF MATERIALS)

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1997

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1997

﴿وقل إعملوا فسيرى الله عملكم ورسوله والمؤمنون﴾

صدق الله العظيم

Statement

This thesis is submitted to the Department of civil Engineering , faculty of Engineering , Menoufia university , for the award of M.Sc.

Thesis Title :

FIBRE REINFORCED CONCRETE

The work included in this thesis has been carried out by the author in the Department of civil Engineering , Faculty of Engineering , Menoufia University . No part of this thesis has been submitted to any other university or institude for the award of a degree or a qualification .

Author's Name :

Signature :

Date :

The above statement has been signed by the author

Supervisors

(.....)

(.....)

Head of the Department

(.....)

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ABSTRACT

The increasing interest in the use of various fibre types to improve properties of concrete led to this comparison study using both steel and polypropylene fibers .

For steel fibers the parameters studied were steel fibre content , silica fume content and sand / gravel ratio . The test specimens were classified into different groups , in which a parameter was varied with the other two parameters were kept constant . The effect of such parameters on both fresh and hardened concrete properties were investigated .

For polypropylene fibres the parameters studied were polypropylene fibre length , polypropylene fibre content , silica fume content , sand / gravel ratio and aspect ratio . The test specimens were classified into different groups in which a parameter was varied and the other parameters were kept constant . The effect of such parameters on both fresh and hardened concrete properties were investigated .

Also eight fibre reinforced concrete simply supported beam specimens having under reinforced sections were tested in this work . The main parameters for these beams were the fibre type (steel - polypropylene) , thickness of the fibrous concrete layer cast in the beams tension zone . The effects of the given parameters on cracking load , ultimate load , deflections , strains and crack pattern were investigated . The important results were given in the conclusions . The important recommendations and future studies are suggested .

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