بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

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

MONA MAGHRABY

Experimental Study on Punching Shear Behavior of RC Flat Slabs According to the Egyptian Code

By

Mahmoud Mohamed Mohamed Ahmed

A Thesis Submitted to the
Faculty of Engineering at Cairo University
In Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
IN
Structural Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Under the Supervision of

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Title of Thesis:

Experimental Study on punching Shear Behavior of RC Flat Slabs According to the Egyptian Code

Key Words:

Punching, flat slabs, flexural reinforcement, shear reinforcement, crack pattern.

Summary:

In this research six of reinforced concrete slabs samples were tested in laboratory. These samples have a model scale 1:5. The samples a flat slab with concrete dimensions 1000x1000 mm and with thickness 160 mm. they have a concrete square column with dimensions 150x150 mm. Some variables were considered the distance between flexural longitudinal reinforcement, the distance between shear reinforcement and the width of the stirrups. The results of the sample were compared to those estimated by the Egyptian and international codes. The results indicated that the strength of punching increased with increasing the flexural and shear reinforcement in experimental samples. These samples were simulated by using ANSYS 17.2. The theoretical results were verified against experimental results and it's founded the theoretical results near to the experimental results. The results indicated that the strength of punching increased with increasing the flexural and shear reinforcement in theoretical samples; it's the same in the experimental results.

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: Mahmoud Elnahla Date: ../../…(it’s the date that you handover the thesis)

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Dedication

To my lovely parents, sisters, brothers and all my friends
Mahmoud Elnahla

AKNOWLEDEMENT

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