شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

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جامعة عين شمس

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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HANAA ALY

AIN SHAMS UNIVERSITY
FACULTY OF ENGINEERING
DEPARTMENT OF STRUCTURAL ENGINEERING

Strengthening of Post Tensioned Flat Slabs Using FRP Strips

Thesis
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy (PhD)

In
Civil Engineering (Structures Engineering)

By

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STATEMENT

This thesis is submitted as partial fulfillment of phd degree in civil engineering (structural), Faculty of engineering, Ain Shams University.

The other carried out the work included in this thesis, and no part of it has been submitted for a degree or qualification at any other scientific entity.

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ABSTRACT of PHD THESIS

Thesis Title: Strengthening of Post Tensioned Flat Slabs Using CFRP Strips

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ABSTRACT

This thesis is experimental and numerical studies to investigate the performance of fully pre-stress two-way post-tensioned slab strengthening using CFRP Strips to prove its efficient work in two-way pt slabs action. taking into account some different parameters as bond tendon, unbonded tendon and pre-compression ratio.

The experimental program included five post tension two-way slabs. The design was carried out for most widespread code ACI318-14, ACI440.2R-17and extent to compare the design requirements and the design results with ECP203. The numerical analysis using the Finite Element Method was implemented through ANSYS program. A good correlation between FE and experimental results.

Performance of the fully pre-stress post tensioned two-way slab pre-strength with CFRP strips have better performance in boded rather than unbonded. and the effect of pre-compression in CFRP strain is the same for different values.

KEY WORDS:

Post tensioned, Post tensioned slab, CFRP,strips

LIST OF CONTENTS

LIST OF TABLES

LIST OF FIGURES