



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





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# شبكة المعلومات الجامعية

## التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأفلام قد اعدت دون أية تغيرات



## يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of  
15 – 25c and relative humidity 20-40 %



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# بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات  
لم ترد بالأصل

# **SHEAR TRANSFER IN COMPOSITE CONTINUOUS ONE WAY PRE-SLABS**

**BY**  
**AHMED SHABAN ABDEL-HAY GABR**  
**B.SC. Civil Engineering 1994 (Honor)**  
**M.SC. Structural Engineering 2000**

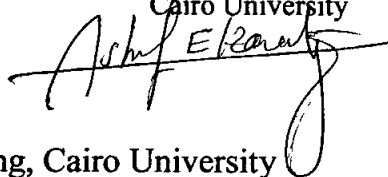
**A Thesis Submitted To The**  
**Faculty of Engineering at Cairo University**  
**In Partial Fulfillment of the**  
**Requirements for the Degree of**  
**DOCTOR OF PHILOSOPHY**  
**In**  
**Structural Engineering**

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**Mar.2006**

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## **Abstract**

One of the most common types of the composite concrete elements is the pre-slab which is used extensively in the construction of both buildings and bridges. It consists of a pre-cast concrete layer serves as a form or skeleton for the cast-in-place layer. The problem of shear transfer is the major in the study of the behavior of pre-slabs to achieve the composite action between two layers.

Many researches had been carried out to study the shear transfer between two concrete layers; few of them studied the behavior of continuous pre-slabs.

In this thesis, the behavior of continuous one way composite Pre-slab was studied. The experimental program consists of two parts; the first part contains testing of 40 push-off specimens consists of two parts cast at different times and subjected to compressive stress normal to the shear plan. The main studied parameters in this part were the degree of interface roughness, use of epoxy paint, use of steel dowels with different percentages of area and dowel length, use of concrete shear keys, compressive strength of existing and new part, and using of different stress levels normal to the shear plan. Based on test results of the first part, a suggested theoretical model to predict the ultimate shear strength was presented.

The second part of the experimental program was testing 10 slabs, one of them was reference monolithic slab and the others were composite pre-slabs composed of two layers casted at different ages using different types of interface connections such as roughing the interface to different degrees of roughness, using binding materials and using steel dowels with different distributions along the interface.

Finally comparison between experimental results of tested pre-slabs and theoretical results obtained from analysis using F.E. program was carried and recommendation was suggested.



# Contents

	<b>Page</b>
<b>Acknowledgement</b>	i
<b>Abstract</b>	ii
<b>Contents</b>	iii
<b>List of Tables</b>	x
<b>List of Figure</b>	xii
<b>Chapter (1)</b>	1
Introduction	1
1 – 1) General	1
1 – 2) Objectives	2
1 – 3) Scope and Contents	2
<b>Chapter (2)</b>	5
Review of Previous work	5
2-1) General	5
2-2) Composite Section	5
2-2-1) General	5
2-2-2) Examples of Composite sections	6
2-2-3) Structural behavior of composite flexural members	6
2-3) Shear transfer	7
2-4) Shear transfer mechanism in composite members	8
2- 4-1) The shear friction theory	8
2-4-2) General theory for shear transfer mechanism of concrete	10

2-4-3) Truss action model of shear transfer	12
2-5) Shear transfer tests	15
2-6) types of composite slabs	17
2-6-1) composite slabs with prefabricated Beams	17
2-6-2) Conventional steel deck slab system	17
2-6-3) Composite concrete – concrete slabs.	17
2-7) Composite action between two concrete surfaces	17
2-8) Different types of shear connections between two concrete surfaces	18
2-8-1) Rough surface connection	18
2-8-2) Shear keyed connection	24
2-8-3) Steel doweled shear connection.	27
2-8-3-1) Effect of percentage area and embedded length of dowels.	28
2-8-3-2) Effect of steel strength, bar size and spacing	30
2-8-3-3) Distribution of the steel dowels over the span.	30
2-8-4) Epoxy binding materials	31
2-9) Factors affecting the strength of different shear connections .	32
2-9-1) Concrete compressive strength	32
2-9-2) Ratio of shear span to effective depth	33
2-9-3) Effect of slip	34
2-9-4) Dimensions and reinforcements of the tested specimens	34
2-9-5) Effect of differential shrinkage	35
2-9-6) Effect of composite interface position with respect to neutral axis	37