



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



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



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بالرسالة صفحات
لم ترد بالأصل

Time Dependent Behaviour of High Strength Concrete Beams

by

Osama Ehab Mohmed Abd El-Salam

**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
CIVIL ENGINEERING
(STRUCTURES)**

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**FACULTY OF ENGINEERING, CAIRO UNIVERSITY
GIZA, EGYPT
2000**

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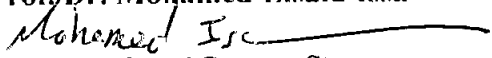
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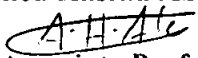
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Time Dependent Behavior of High Strength Concrete

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1. TITLE: TIME DEPENDENT BEHAVIOR OF HIGH STRENGTH CONCRETE

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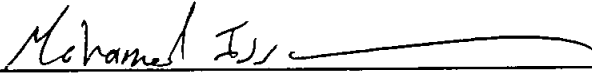
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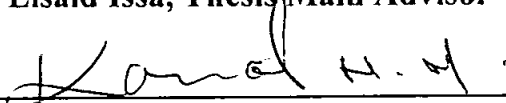
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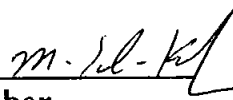
**Approved by the
Examining Committee:**



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ABSTRACT

Over the past several years, development in structural materials such as prestressed concrete and the use of high-strength steel, and the use of methods of design such as ultimate strength, have led to a progressive increase in the strength of the concrete used in structures. Therefore, interest in high-strength concrete has increased greatly.

The substitution of High-Strength-Concrete for the Normal-Strength-Concrete might significantly reduce the cost. In addition, the amount of compressive steel reinforcement might be substantially reduced. Reduction in span-to-depth ratio might also be possible in long-span reinforced and prestressed concrete.

With the continuous development in concrete as a primary construction material and with the recent development of the production of High-Strength-Concrete (H-S-C), a natural tendency would be to exploit a higher proportion of the strength of the concrete. Therefore, it is important to know the behaviour of High-Strength-Concrete under stress and sustained loads above the ordinary normal working stress. Most of the previous studies on the time-dependent-deflection were carried out at low stress levels compared to the short-term ultimate of the normal concrete. In this research High-Strength-Concrete beams with three compressive strengths were tested under different percentages of sustained ultimate loads, and different percentages of compression reinforcement, for long period of time.

