بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية 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 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

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
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in
CIVIL ENGINEERING
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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.