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

INVESTIGATING THE PERFORMANCE OF NANO SILICA & CARBON NANO TUBES CONCRETE SUBJECTED TO ELEVATED TEMPERATURE

By

Ahmed Saied Ahmed Abd El-Haleem

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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Title of Thesis:

Investigating the Performance of Nano Silica & Carbon Nano Tubes Concrete Subjected to Elevated Temperature

Key Words:
Nano Silica; Carbon Nano Tubes; Fire Resistance; Elevated Temperature; Thermal Effect.

Summary:

This research thesis presents the results of a study on the performance of concrete containing relatively small volume of nano silica (up to 1.5%) and carbon nano tubes (up to 0.03%) exposed to severe heating conditions in order to evaluate the effect of exposure to the elevated temperature on the properties of the hybried (nano silica - carbon nano tubes) concrete subjected to elevated temperature up to 600°c. The results confirmed the ability of nano silica and carbon nano tubes to enhance the mentioned properties.

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: Date: …/…/2021

Signature:

Dedication

To my family and friends that has a great effect on my life,

All my love to you for your care and support.

Acknowledgments

IN THE NAME OF ALLAH, THE MOST GRACIOUS AND THE MOST MERCIFUL

First and above all, I have to thank **Allah** for giving me wisdom and knowledge I have today. I praise **Allah** for His care and support and providing me with the opportunity to present my hard work in a beneficial knowledge to people.

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