



Cairo University

LIFE CYCLE ASSESSMENT OF CEMENT INDUSTRY IN EGYPT – ENVIRONMENTAL IMPACT ASSESSMENT

BY

ABDURRAHMAN MOHAMED AHMED ALI AWAD

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:

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Key Words: Cement, Environment, Life Cycle Assessment, Environmental Impact

Summary:

The objective of this thesis is to understand the reality of grey cement industry in Egypt in terms of environmental and energy aspects through a life cycle assessment with reference to worldwide average performance in addition to providing useful suggestions towards more sustainable practices. This thesis has concluded the highest environmental impacts of cement industry in Egypt are fuel consumption, electrical consumption, and CO emissions. Finally, this thesis will provide suggestions for future researches, recommendations for cement producers, the Egyptian governments, and Non-Governmental Organizations.

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Most importantly, I would like to recognize my wife's support that was the strongest motive to finish this thesis. I could have done nothing without her love and support.

Dedication

*Dedicated to my father's soul, may God bless him with
all mercy, to my mother, and to my wife and soul mate
Dr. Wesam Reda.*

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