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AIN SHAMS UNIVERSITY  
FACULTY OF ENGINEERING  
Structural Engineering

## **Production of one-part geopolymer through thermo-chemical treatment process**

A Thesis submitted in partial fulfillment of the requirements of the degree of  
Master of Science in Civil Engineering  
(Structural Engineering)

by

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## STATEMENT

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This thesis is submitted as partial fulfillment of Master of Science in Civil Engineering (Structural Engineering), Faculty of Engineering, Ain shams University.

The author carried out the work included in this thesis, and no part of it has been submitted for a degree or a qualification at any other scientific entity.

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## **LIST OF NOTATIONS**

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OP-AAMs	: One part alkali-activated materials.
OP-AAS	: One Part Alkali-Activated Slag.
GGBFS	: Ground Granulated Blast Furnace Slag.
DM	: Dry Mixing process.
TCT	: Thermo-Chemical Treatment process.
MCT	: Microwave Chemical Treatment process.
TCT300	: TCT powder prepared at 300°C.
MCT-10M	: MCT powder prepared using microwaving period of 10M.
OP300	: One Part Alkali-Activated Slag mix prepared using TCT300 powder.
OP-10M	: One Part Alkali-Activated Slag mix prepared using MCT-10M powder.
XRD	: X-Ray Diffraction.
SEM	: Scanning Electronic Microscope.