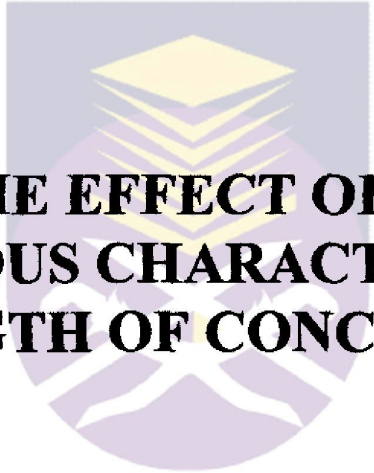FINAL YEAR PROJECT REPORT
BACHELOR IN ENGINEERING
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SCHOOL OF CIVIL ENGINEERING
MARA INSTITUTE TECHNOLOGY
SHAH ALAM, SELANGOR

TO STUDY THE EFFECT OF LATEX IN THE VARIOUS CHARACTERISTIC STRENGTH OF CONCRETE

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ACKNOWLEDGMENT

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ABSTRACT

Cement composite can be modified to improve its physical characteristic and strength in a different manner and one of them is by adding a polymer such as latex. However, the application of latex as a concrete modification is limited to synthetic latex and so far too little attention is given to the natural latexes.

A comparison between natural concrete and a concrete samples added with latex is being studied due to the different proportion and characteristic strength of concrete.

The main objective of this work is to study the effect of latex in the various characteristic strength of concrete. Properties which is going to be tested are tensile strength, workability, compressive strength and the surface absorption.

Previous studies have shown that the present of natural latex has changed the properties of both the fresh and hardened concrete. It has also given some impressive results that leads to the needs of further tests until the advantage of latex concrete is found.

CHAPTER ONE

INTRODUCTION

1.1 General

Concrete is a convenient material suitable for various applications. It is not only to widen the use of natural rubber itself but also to obtain a new construction material of high quality and performances.

Cement composite has been used widely as a building material especially in construction industry. This is because of the properties which having a high compressive strength and a good resistance to weathering processes. The weakest part is the lower tensile strength and natural brittle.

Various effect has been done to improve its behaviour and one of them is by adding the latex admixture. The present idea of incorporating the natural latex in concrete has not been able to be commercialised because of lack of extensive and exhaustive research done in this area. Therefore, no clear data or evident that can really substantiate the usefulness of this material.

1.2 Field Of Study

Latex admixture is one of the latest research which is quite a success in improving the tensile strength and durability, ductility, a changed in the properties of both fresh concrete and hardened concrete as well as improving the bonding strength to other materials.

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