

**FINAL YEAR PROJECT REPORT
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**THE EFFECT OF LATEX CONTENT TO THE
PROPERTIES OF CONCRETE GRADE 25**

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ABSTRACT

Nowadays Malaysia is one of the main natural rubber produce country in the world. Hence the natural rubber can be easily found with cheaper price. It has very useful to developed and extended the usage of natural rubber especially in the construction industries. With appropriate process of technology, it has becomes possible to incorporates natural rubber latex into concrete as the replacement to results the increase the workability and durability of concrete.

This study present to attempt the behavior of the stress-strain characteristic, the workability, compressive strength and permeability of the cement-latex concrete. The effects of latex with different percentage will be added to replace the fine aggregates in the plain concrete were investigated and compared to the plain concrete with the same grade. Further studies to be carried out to find the optimum dosage of latex that can gives the optimum advantages of latex concrete.

CHAPTER 1

1.0 INTRODUCTION

1.1. General

Previous studies on the effect of latex admixture on the rubber behaviour of concrete are inconclusive. Four parameters were examined in this study, namely, stress-strain characteristic, permeability, compressive strength, and workability. By varying the percentage of latex admixture, it was anticipated that an optimum dosage could be determined that gives satisfactory result for the above parameters.

Cement-Latex compositions have several noteworthy properties (W.H. Stevens, 1948) :-

1. They yield-warm feeling, durable and resilient products.
2. Due to their plastic stage, they can be applied in continuous, i.e., jointless form.
3. They have excellent adhesion to a variety of other materials.
4. They have widely compoundable, that is to say, a wide variety of fillers, aggregates, pigments and the like, both organic and inorganic, can be included in the compositions, depending on the properties required, appearance, cost consideration and etc.

An important and valuable attribute of a plastic composition that can be laid in jointless form and varying thickness and having good adhesive properties, is the possibility of levelling up uneven surfaces. Thus cement-latex compositions are