

Thesis Title	A Study of Mechanical Properties of Concrete Mixed with Rubber latex
Thesis Credits	3
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Abstract

This senior project studied the mechanical properties and water absorption of concrete mixed with pre-vulcanized rubber latex. The tests were performed to analyze the workability, bleeding, compressive strength, tensile strength, flexural strength, bond force and water absorption of concrete mixed with pre-vulcanized rubber latex. The different proportions of polymer and portland cement (P/C) 0%, 5%, 10% and 15% and the proportion of water and cement ratio (W/C) 0.62. The strength test was done for moist cured at 7, 14 and 28 days for dry cured. The results of the study illustrate that polymer and cement ratio 5% gives the best performance. Average strength were 216.6 ksc of compressive strength, 26.05 ksc of tensile strength, 44.64 ksc of flexural strength, 22.32 ksc of bond force and 1.031% of water absorption. Therefore, the concrete with 5% of P/C ratio is appropriate for the construction of irrigation canal, based on the result of this research.

Keyword : Pre-vulcanized rubber latex / Concrete / Mechanical properties of concrete / Water absorption