

**RECYCLED NYLON FISHING NET AS FIBER REINFORCEMENT
IN CONCRETE MAKING**

THESIS

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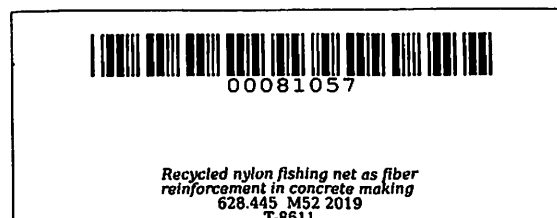
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ABSTRACT

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Nylon fibers are considered as fiber reinforcement in concrete making. Recycled nylon fishing net fibers were used in this study. Old and waste nylon fishing nets can cause pollution and can affect the marine species because of its slow degradation. The best way to address such problems is to develop the usage of old nylon fishing nets as a resource material. This study has the main objective to determine the effect of using recycled nylon fishing net fibers as fiber reinforcement on the compressive and flexural strength of the concrete.

The highest tensile strength of a recycled nylon fiber was observed from a 0.40 mm diameter nylon fishing net strand which held 213 8.67grams before rupture. Freshly mixed concrete with more recycled nylon fishing net fibers was less workable. Three treatments were conducted (0%, 1% and 2%) and the results revealed that as the amount of the recycled nylon fishing net fibers increases, the compressive and flexural strength also increases. The use of recycled nylon fishing net fibers as fiber reinforcement in concrete making is effective and economical.

After the study was conducted the researchers was recommend to; utilize and evaluate the effect of recycled nylon fishing net on different structural materials like bricks, CHB etc.; determine and evaluate the cracking control characteristics of the recycled nylon fishing net reinforced concrete; conduct a study utilizing varying percentage in mixture higher than 2 percent and find the peak percentage of recycled nylon fishing net.

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INTRODUCTION

The erroneous disposal of any material and equipment use in fishing can contribute to various environmental problems like coral destructions and water pollution. This improper disposal can also be deadly for a variety of deep-sea creatures. One of the materials that can cause problems is the waste nylon fishing nets.

In coastal areas, the main source of income is fishing. Fishing net is one of the factors that should be considered in having a good income in fishing boat business. As time passed by, the fishing net becomes weak, brittle and not usable in fishing anymore. The waste fishing nets are sometimes used as fencing material and in other related uses but sometimes it's just a waste that can affect people, the environment and marine lives.

Nylon fishing net presents a growing waste management challenge and when managed poorly contributes to the accumulation of waste plastics in the marine environment. Fishermen sometimes abandon worn-out nets because it is often the easiest