

**WASTE TARPAULIN FIBER AS AN ADDITIVE IN CONCRETE**

**THESIS**

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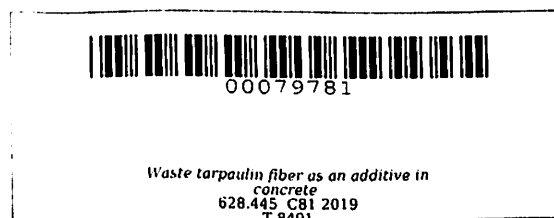
**June 2019**



# **WASTE TARPAULN FIBER AS AN ADDITIVE IN CONCRETE**

**Undergraduate Thesis  
Submitted to the Faculty of the  
College of Engineering and Information Technology  
Cavite State University  
Indang, Cavite**

**In partial fulfillment  
of the requirements for the degree of  
Bachelor of Science in Civil Engineering**



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**June 2019**

## **ABSTRACT**

**CORDERO, ACE ELDRIN T. And DE GRANO, JOSE MARIE M. Waste Tarpaulin Fiber as an additive in concrete.** Undergraduate Thesis. Bachelor of Science in Civil Engineering. Cavite State University, Indang, Cavite. June 2019. Adviser: Engr. Cene M. Bago.

Tarpaulin Fiber is considered as possible reinforcement material that has different properties. However, tarpaulins were just dumped after using in different events that considered as waste material. The best way to lessen that problem is to develop the usage of waste tarpaulin as a resource material. The main objective of the study was to determine the effect of waste tarpaulin fiber on the flexural and compressive strength of fiber reinforced concrete.

In this study waste tarpaulin is used as an additive in concrete. The cost of producing tarpaulin fiber as an additive in concrete is compared with the plain concrete. The Highest strength of tarpaulin fiber was observed from a single strand of 10inch diameter of tarpaulin fiber that held 883.3 grams before rupture. The researchers observed that the fiber did not absorbed water.

Four treatments were conducted (0%, 15%, 20%, and 25%) and the results revealed that the treatment with 20% gained the highest compressive and flexural strength, while the treatment without the tarpaulin fiber obtained the least strength. Waste Tarpaulin fiber as an additive in concrete gained a good result of adding strength in compressive and flexural strength in concrete.

Since the effect of adding tarpaulin fiber in concrete occurred when the amount of fibers are moderate, future researchers are encouraged to evaluate higher percentage of fiber to know the effects in concrete for both compressive and flexural strength.

The researchers used Class A mixture design in this study, future researchers are encouraged to use different mixture design to evaluate the effects of adding tarpaulin fiber in concrete. It can be utilized the behavior of tarpaulin fiber in different construction materials like bricks and pavement.

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# **WASTE TARPAULIN FIBER AS AN ADDITIVE IN CONCRETE**

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An undergraduate design project submitted to the faculty of the Department of Civil Engineering, College of Engineering and Information Technology, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for the degree of Bachelor of Science in Civil Engineering with Contribution No. 2018-19-2-203 prepared under the supervision of Engr. Cene M. Bago

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## **INTRODUCTION**

Historically, much effort has been spent improving the behavior of concrete structures. Flexural, compressive, shear strength, ductility, and other properties have been the focus of many researchers who have tested concrete with added steel and other materials to improve the behavior of the concrete.

Concrete is a mixture of cement, sand, coarse aggregate and water. Concrete is known for having a compressive strength but less in tensile strength. Our industry is searching for other materials that can be mixed up with concrete to have great impact in strength and other properties that can help to the structure. Different kinds or ratio of mixture for concrete have a big effect on the structure. We are searching for the mixture that we need for additional strength in concrete. Nowadays, fiber is produced from different materials such as steel, glass, carbon and synthetic material. Each one of these fibers has it