

THE EFFECT OF ADDING STEEL FIBER FROM USED TIRE ON THE NORMAL TENSION STRENGTH OF CONCRETE USING JMF SNI 7656:2012 QUALITY 20 MPA

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ABSTRACT

Waste from the used tire industry can be used as steel fiber in the manufacture of concrete. The fiber used comes from tire-forming wire, used tire waste is one of the largest contributors to waste and is a material that cannot be decomposed by organisms. This research was conducted to determine the value of the tensile strength of concrete using steel fibers from used tires. The method used in this research is JMF SNI 7656:2012 quality 20 MPa with the addition of used tire steel fiber percentages of 0%, 0.5%, 1%, 1.5%. The specimens were treated for 7,14,21 and 28 days and then tested to get the value of the tensile strength of the concrete.

The results showed that the highest tensile strength value of concrete was the addition of steel fiber with a percentage of 0.5% of 2.22 MPa at the age of 28 days, the highest percentage of 1% was 2.43 MPa at the age of 28 days and the highest percentage of 1.5%. of 1.82 MPa at the age of 21 days. For concrete without the addition of steel fiber used tires, the highest percentage of 0% is 2.17 MPa at the age of 28 days

Keywords: Used Tire Steel Fiber, JMF SNI 2012, Split Tensile Strength