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ANALYSIS OF THE EFFECT OF SEDIMENT STONE AS A REPLACEMENT OF CRUDE AGGREGATE IN STRONG STRESS OF NORMAL CONCRETE

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ABSTRACT

In general, concrete is the main material that is often used among construction such as the construction of structures and infrastructure. As it is known that the main ingredients used to make concrete are water, cement, fine aggregate and coarse aggregate. Concrete has several easy maintenances, and easy steps to implement. Increased use of concrete can trigger new innovations in the design of making mixtures in concrete.

By triggering innovation on this occasion, the author conducted a mixed research on concrete using Sedimentary Stones. The author plans a mix design with Fc 30 quality, the test specimens used for this study are 16cm x 30cm cylinders. The proportion of the addition of a mixture of sedimentary stones is as much as 15%, 20%, 25%, concrete that will be tested at 7, 14, 21, and 28 days.

From the results of this study, the concrete mixed with sedimentary stones of 0% obtain an average of 355.25 kg/cm^2, 15% of sedimentary concrete mixes get an average of 358 kg/cm^2. 20% of sedimentary concrete mixes get an average of 380.75 kg/cm^2, and 25% sedimentary concrete mix gets an average of 344.5 kg/cm^2. Thus, it can be concluded with the addition of sedimentary stones as coarse aggregate substitution materials by 15%, 20% can add concrete compressive strength, while the addition of sedimentary stones as much as 25% cannot add concrete compressive strengths increase lower concrete compressive strength.

Keywords: *Concrete, sedimentary rock, concrete compressive strength, slump test,*