

ABSTRACT

This final project discusses the use of concrete tile waste as a substitute for some fine aggregate, for the use of concrete mixtures. This research was conducted at the Laboratory of the University of Sangga Buana YPKP, by comparing normal concrete with concrete mixed with concrete roof tiles, which are made in four variations of the mixture, namely normal concrete (0%), concrete with a concrete roof composition of 25%, 50%, and 75. % as a substitute for fine aggregate. The compressive strength test was carried out at the age of 7 and 28 days with a total of 8 cylindrical specimens.

In the results of the compressive strength test at the age of 28 days with a mixture composition of 1: 2: 3, the optimum value is obtained for the concrete mixture with a 75% concrete roof composition, which is 22.64 Mpa, while for normal concrete the compressive strength value is under concrete with a mixture of concrete tile substitution. 75%, namely 0% substitution of concrete tiles of 18.11 MPa, 25% substitution of concrete tiles of 18.96 MPa, and substitution of concrete tiles of 50% of 19.52 MPa.

Roof tile waste is good for use as a substitute for fine aggregate in low-strength concrete, but if it is for high quality concrete, a deeper study is needed.

Keywords: Waste Concrete Roof Tile, Concrete Roof Tile, Concrete Compressive Strength, High Quality Concrete, Fine Aggregate Substitution