

ABSTRACT

TRI WULANDARI, *Study of Curing Temperature on Compressive Strength of Kaolin Based Geopolymer*. Thesis. Jakarta: Department of Civil Engineering, Faculty of Engineering, State University of Jakarta in 2016.

This research aimed to analyze curing temperature on the compressive strength of geopolymer concrete. The studied object were kaolin based.

This research was conducted in Materials Testing Laboratory, State University of Jakarta with experimental method. This research uses a cylindrical test object with a diameter of 15 cm and 30 cm high. The treatment of the test object is inserted into the oven at temperature of 60°C, 75°C, 90°C, 105°C, and 120°C for 8 hours. Compressive strength testing of geopolymer concrete is using a Crushing Test Machine.

These results indicate that there is an increase in compressive strength of geopolymer concrete at different curing temperatures. The higher the curing temperature, the stronger the compressive strength of geopolymer concrete is produced, the results of compressive strength of geopolymer concrete with curing temperature of 60°C, 75°C, and 90°C are 11,65 MPa, 12,92 MPa, and 14,70 MPa. However, the compressive strength of geopolymer concrete decreases at curing temperatures above 100°C, the results of compressive strength of geopolymer concrete with curing temperature of 105°C and 120°C are 12,97 MPa and 11,42 MPa.

Keywords: Curing Temperature, Geopolymer Concrete, Compressive Strength