

ABSTRACT

THE EFFECT OF STEAM CURING ON THE COMPRESSION STRENGTH OF CONCRETE

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This research was conducted to determine the effect of steam curing on the compressive strength of concrete. The specimens used in this study is a cylinder with a diameter of 150 mm and a height of 300 mm. Variations in temperature and time in this study were taken from of 65°C, 75°C, 85°C with duration of curing from 1 hour, 2 hours, 3 hours. The immersion treatment was carried out after the steam curing and the compressive strength test of the concrete was carried out when the specimens reached the age of 7 days, 14 days, and 28 days. The multiple linear equation obtained is $y = 20,008 + 0,139x_1 + 0,32x_2$. With y = compressive strength of concrete, x_1 and x_2 are temperature and time in steam curing. The results of the study showed that steam curing had an effect on increasing the compressive strength of concrete by 9.3% against normal concrete. The result is a steam curing with a temperature of 85°C and a time of 3 hours. So that this variation is the most appropriate of 9 variations of temperature and time, in an effort to increase the compressive strength of concrete.

Keywords : Concrete, Steam Curing, Compressive Strength of Concrete

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