

ABSTRACT

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Title : Combination Study of PCC and OWC Cement Use On K-600 Quality
Concrete Against Penetration of Sulfuric Acid

Cement PCC (Potrland Composit Cement) Suitable for binder and recommended for general construction and building material usage such as in pair and plaster of brick wall and environmentally friendly at relatively affordable price and many in market or building shops. Cement OWC (Oil Well Cemen) Class G-HSR (Hight Sulfate Resstance) cement which is very high sulphate resistance level, for environment with high sulfate content of this type of cement is very suitable for use, but this type of cement is difficult to obtain in the market with ju mlah which is limited, seen from the price of this type of cement is relatively expensive. This type of cement is specially constructed for high sulphate level construction so that it is resistant to sulfate attack.

In studies using experimental methods to manufacture cylindrical specimen with a size of 10 cm x 20 cm, with 5 variations OWC combination of 100%, 100% PCC, PCC OWC 75% 25% 50% PCC OWC 50% .S ebanyak 70 test specimens immersed in plain water for 28 days of immersion, then immersion using 95% Sulfuric Acid Solution during 14 days of immersion. A review of the effect of sulfate was performed by testing the compressive strength and spraying using the indicator solution to determine the level of sulfate attack on the concrete.

The results of this study show Combination of Cement Use of PCC and OWC in one variation In combination of PCC Cement 75% OWC 25% experiencing new compressive strength of concrete, at 14 days K-654 average concrete compressive strength and 28 days concrete life reach K- 708 and soaked Sulfuric acid solution did not decrease significantly, at age 35 days soaked Sulfuric Acid reached K-527 and back up at age 49 day reach K-669 and in review of how big sulfate attack to concrete show concrete did not damage at concrete core.

Keywords: Compressive Strength, Sulfuric Acid, Corrosive.