THE NEW DEVELOPMENT OF INTERFACE STRENGTH MODELS ON SUBSTRATE AND OVERLAY LAYER USING DIRECT SHEAR TEST METHOD

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ABSTRACT

This research aims to: (1) differences in compressive strength of the direct shear strength; (2) the age difference of the direct shear strength test results; (3) methods developed for direct shear tests. This research was conducted experiment laboratory with a sample of 24 shear test speciment and 18 concrete cylinders. the results of this study were analyzed using quantitative descriptive. The test results showed that the variation on substrate layer, compressive strength will affect to the shear strength, whereas in the overlay layer that affect shear strength is the value of water-cement ratio. Differences in the age of concrete will significantly affect the shear strength of the overlay layer and the substrate layered variation of age difference does not significantly impact the shear strength. The method developed to obtain a pure shear strength is to provide flops on a substrate, in order to avoid an balance of forces subhected to the layered interface. This method proved to be quite stable in value of shear strength of the interface between the substrate and overlay.

Kata Kunci: *adaptive, cooperative learning, destructive*