

ABSTRACT

CORRELATION CONSOLIDATION VALUE AND COMPRESSIVE STRENGTH VALUE ON CLAY THAT SUBSTITUTED BY SAND MATERIAL

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This study was conducted to determine the behavior of reduction and compressive strength in clay which is substituted with sand material and to see the correlation between the value of consolidation and the compressive strength on the soil. Because the clay when getting loading there will be a significant reduction in soil that affects the reduction in carrying capacity or compressive strength of the soil. In this study used clay from the village of Belimbing Sari, Jabung district, East Lampung with the coordinates of 105° 39 '10.74 "T and 5 ° 31' 44.26" S.

The research was done by testing on samples without a mixture of clay and the clay soil mixed with sand with varying amounts of sand mixture of 10%, 20%, and 30%. Testing was conducted on a standard compaction test to find the optimum water content, consolidation testing to find the value of the coefficient of consolidation (C_v), compression index (C_c) and coefficient of compression (A_v) and compressive strength testing are free to seek the compressive strength on the soil.

Based on the results of this study can be seen in the behavior of a mixture of clay and sand without once mixed with sand material that is an increase in the value of the coefficient of consolidation (C_v), a decrease in the value of compression index (C_c) and coefficient of compression (A_v) and an increase in the compressive strength (q_u) in the clay soil. Value increases and decreases that occur without a mixture of clay and after mixed variations mixture of 10%, 20%, and 30% tend to be stable. From this study it can be concluded that the value of consolidation and strong correlation press substituted clay with sand material that is smaller then the consolidation of soil compressive strength will be greater as well.

Keywords: Soil Clay, Sand, Consolidation, Soil Compressive Strength