

STABILIZATION OF CLAY SOIL WITH POWDER OF GLASS AND PADDY HUSK ASH IN THE PLN SUBSTATION DURI KOSAMBI REVIEWED FROM UNCONFINED COMPRESSION TEST

Zulfahmi Argian Pratama, 201521032

Under the guidance of Dyah Pratiwi Kusumastuti, S.T., M.T.

ABSTRACT

Soil stabilization is one way to soil reinforcement. The mixing ingredients for stabilization with powder of glass and paddy husk ash. In this study to determine the index properties of soil from GI Duri Kosambi and compare carrying capacity of soil that mixed with powder of glass and paddy husk ash. The research was conducted by totally sampling are 11, then laboratory test to determine the value of Index Properties and Unconfined Compression Test. In this research, Index Properties of soil are 55,9284% water content, 2,3994 for specific gravity, liquid limit 80,5060%, plastic limit 44,0612%, and shrinkage limit 27,8889%. Based on the USCS classification, the soil included of CH (Clay-High plasticity) type whereas the USDA classification, the sample included at clay. The result showed that compressive strength value (q_u) on native soil is 0,301 kg/cm². In the initial curing, optimum compressive strength (q_u) at 10% SK + 10% AG variation, 1,347 kg/cm². At the 7 day curing, soil compressive strength grow up till the optimum value at 10% SK + 2,5% AG variation is 1,84 kg/cm² and soil compressive strength (q_u) decreases until to mixture variation 10% SK + 10% AG at 1,12 kg/cm², but the compressive strength value above of compressive strength in native soil.

Keywords : Soil Stabilization, Unconfined Compression Test, Powder of Glass, Paddy Husk Ash.