

ABSTRAK

CLAY CONSOLIDATION STUDY BY USING SAND DRAIN METHOD IN DOUBLE DRAIN CONDITION WITH AXISYMMETRIC MODELING

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On the buliding of civil construction, soil have a very important part. In this case, soil has a function as a load restrained to construction above. As an example embankment in highway construction, embankment barrage, and irigation canal. Good or not a construction depend on soil condition. One kind of soil that used as an embankment is clay. The characteristic of clay itself have the high ability of water absorbsing, whereas if there's a building above will cause a hisdrostatic strains, which is if clay who got the load above that ground level clay will consolidated or get slowly conceited shrinkage that impact to the destruction on that construction itself. Because of that condition one of the method to accelerate consolidation process for the construction of some stucture is used sand drain method.

In this study sand drain method will combine with double drain condition and used axisymmetric modeling shape, it used to investigated soil treadment in double drain condition axisymmetric system. Axisymmetric system itself chose to get the ideal condition that aproaching the real condition. Modelling shape of clay used sample taken from IAIN Radin Intan Bandar Lampung Campus, put down in a cylinder pype with 25,4 cm diameter and 15 cm high with 5 cm of sand level. Combination of drain patterns that used are trilateral and square pattern. Drain hole in this modelling has a 1,9 cm diameter with distance between hole 5 cm. Load increasing that held is 10 kg, 20 kg, 40 kg.

The result of this study show that sand drain method in double drain condition with axisymmetric modeling can give 0,273 cm consolidation for the trilateral pattern and 0,368 cm for the square pattern in the same period which is 240 hours (10 days)

Key word : sand drain, axisymmetric, soil consolidation