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Classification : KEJURUTERAAN AWAM
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Title :

Investigation of Compressibility Properties of Soft Soil Treated by Cementitious Material in Slurry and Dry Mixing Method

Maximum Duration : 36 month

Start Date :

01/11/2022

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2 years 0 months 0 days

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12

EXECUTIVE SUMMARY

Currently, improving the compressibility properties of a soft soil that used of stabilizing agent has become intention as it has proven can reduce large and very time-dependent settlements to occur. As in geotechnical design, settlements always govern the foundation design, understanding the compressibility properties of composite ground is very important especially the reaction of soil-cement mix in slurry or dry conditions. It includes the optimum amount of water-cement ratio, temperature, curing period and shear strength of the improved soil. It is proved as there is still insufficient information as a guideline to be used by practitioners and resulting in soft soil treated not becoming the preferred method of ground improvement in Malaysia. For instance, improving a deep area of soft clay when a high amount of cementitious material is used leads to a high amount of CO₂ released into the environment. Therefore, this research will be conducted to provide a good interpretation of compressibility values that can be used for ground improvement design with cementitious material by laboratory testing and three- dimensional Finite Element Modelling (FEM). As well as, providing a good design chart for a ground improvement design to be used in the future.