ABSTRACT

THE CORRELATION OF CLAY SOIL CONSOLIDATION TO LOAD INCREMENT RATIO SUBSTITUTED BY COARSE GRADATION MATERIAL (SAND)

By
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Construction strength is influenced by existing soil condition. Erecting building on the clay soil will rise some problems such as weak supporting ability and soil compaction. The clay soil support is commonly low. A construction on the clay soil will cause pore water tension and the load will cause soil consolidation and soil compaction. Therefore, soil consolidation test by applying Load Increment ratio (LIR) is required.

To find out the soil consolidation and soil compaction with LIR method, this experiment uses additional load method with ratios of additional load = 1 (LIR=1) and = 2 (LIR=2). Load application LIR=1 and LIR=2 are to compare magnitude of soil consolidation occurring in each sample.

The results showed that the best soil sample is the one having fastest consolidation. In this experiment, consolidation with LIR=2 undergoes faster consolidation than LIR=1. The fast consolidation is favorable because soil will be obtaining stable condition faster and smallest consolidation is favorable because it reduces risk of construction damage above the soil surface.

Keywords : clay soil, load increment ratio, soil consolidation