

Geotechnical and Mineralogical Properties of Clay Soils in the Second Organized Industrial Region, Konya, Turkey

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Abstract : In this study, geotechnical and mineralogical properties of gypsum containing clay basis which form the ground of Second Organized Industrial Zone in Konya province have been researched through comprehensive field and laboratory experiments. Although sufficient geotechnical research has not been performed yet, an intensive structuring in the region continues at present. The study area consists of mid-lake sediments formed by gypsum containing soft silt-clay basis which evolves to a large area. To determine the soil profile and geotechnical specifications; 18 drilling holes were opened and disturbed / undisturbed soil samples have been taken through shelby tubes within 1.5m intervals. Tests have been performed on these samples to designate the index and strength properties of soil. Besides, at all drilling holes Standart Penetration Tests have been done within 1.5m intervals. For the purpose of determining the mineralogical characteristics of the soil; all rock and X-RD analysis have been carried out on 6 samples which were taken from various depths through the soil profile. Strength and compressibility characteristics of the soil were defined with correlations using laboratory and field test results. Unconfined compressive strength, undrained cohesion, compression index varies between 16 kN/m² and 405.4 kN/m², 6.5 kN/m² and 72 kN/m², 0.066 and 0.864, respectively.

Keywords : Konya second organized industrial region, strength, compressibility, soft clay

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