O 91. UTILIZATION OF UNSATURATED POLYESTER IN IMPROVING THE GEOTECHNICAL PROPERTIES OF THE CLAYS

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ABSTRACT: Soil properties under civil engineering structures; in case of insufficiency in bearing capacity, settlement, liquefaction and stability criteria, ground improvement or deep foundation construction is carried out. Many different soil improvement techniques are applied and the method to be applied is decided according to criteria such as cohesionless or cohesion of the ground, local conditions, layer thickness to be improved and cost. Generally, cohesive soils are drained of the water in the cavities, cohesionless soils are reduced by compression or gaps are filled with a different material. The polymer is defined as the natural or artificial substance found in the structure of large molecules composed of small molecules called monomers. Polyesters, which are a kind of polymer based material, are widely used especially in maritime and construction fields and can gain permanent properties with hardening process. In recent years, research on the use of polyesters in different geotechnical engineering applications has increased. Within the scope of the project, the effect of unsaturated liquid polyester, which is relatively new in geotechnical applications, on stabilization of cohesive soils was investigated by experimental studies. In this context, observed how unsaturated liquid polyester, which will participate in different proportions of cohesive soils with different water content, affects the unconfined compression strength of the cohesive soil.

Keywords: Cohesive Soil, Unsaturated Polyester, Soil Stabilisation, Unconfined Compression Strength