

Assessment and comparison of grouting and injection methods in geotechnical engineering

ABSTRACT

There are various methods and devices to stabilize land and one method that is commonly used worldwide is grouting or injecting a liquid (cement and additives) into voids within a structure, or displacing the gases and liquids from within these. Some examples of grouting method are hydro fracture grouting, compaction grouting, jetgrouting, etc. Selecting the right method for deep soil stabilizing however, depends on several conditions like the type and alternative layers of soil, load size, the situation and type of project, among others. In this paper, the researchers investigate and compare the different kinds of commonly used grouting and injection method specially, Deep Mixing Method according to their characteristics. By using these information and interrelationships, it is hoped that geotechnical engineers could select suitable method for improving problematic soils and solve their difficulties.

Keyword: Grouting; Stabilizing; Injection; Mixing; Soft soil; Cement; Binder