

Directional Ground Improvement Technique for Urban Tunnel Projects in Vietnam

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Abstract : Almost all big cities in Vietnam are often located in the river deltas. Therefore the ground condition on these cities is mostly soft soil. As a result, the soil strengthen works are mandatory in order to prevent the harmful to the third parties and tunnel structure itself in urban tunnel projects in Vietnam. This paper will particularly introduce the large diameter jet-grouted column technique that is recently being successfully applied in Ho Chi Minh City in Vietnam. The success application of this technique for protecting the historical sensitive building and for water cutoff objective of launching and arriving shafts in the urban tunnel project, will be analyzed from construction process, quality control and lessons learnt. From this situation, the large diameter jet-grouted column technique can extend to another urban tunnel projects in Vietnam and other countries which have similar soft soil conditions.

Keywords : large diameter, jet grouting, ground improvement, urban tunnel

Conference Title : ICSMGE 2018 : International Conference on Soil Mechanics and Geotechnical Engineering

Conference Location : Paris, France

Conference Dates : February 19-20, 2018