

Numerical Modeling of a Retaining Wall in Soil Reinforced by Layers of Geogrids

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Abstract : The reinforcement of massifs of backfill with horizontal layers of geosynthetics is an interesting economic solution, which ensures the stability of retaining walls. The mechanical behavior of reinforced soil by geosynthetic is complex, and requires studies and research to understand the mechanisms of rupture. The behavior of reinforcements in the soil and the behavior of the main elements of the system: reinforcement-wall-soil. The present study is interested in numerical modeling of a retaining wall in soil reinforced by horizontal layers of geogrids. This modeling makes use of the software FLAC3D. This work aims to analyze the effect of the length of the geogrid "L" where the soil massif is supporting a uniformly distributed surcharge "Q", taking into account the fixing elements rather than the layers of geogrids to the wall.

Keywords : retaining wall, geogrid, reinforced soil, numerical modeling, FLAC3D

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