

The Risk of Ground Movements After Digging Two Parallel Vertical Tunnel in Urban

Authors : Djelloul Chafia, Demagh Rafik, Kareche Toufik

Abstract : Human activities, made without precautions, accelerate the degradation of the soil structure and reduces its resistance. Operations, such as tunnel construction may exercise an influence more or less permanent on the grounds which surrounded them, these structures alter soil it is necessary to predict their impacts by suitable measures. This research is a numerical analysis that deals the risks and effects due to the weakening of the soil after digging two parallel vertical circular tunnels in urban areas, and suggests forecasting techniques based essentially on the organization of underground space. The simulations are performed using the finite-difference code FLAC in a two-dimensional case and with an elasto-plastic behavior of the soil.

Keywords : sol, weakening, degradation, prevention, tunnel

Conference Title : ICCEAM 2015 : International Conference on Civil Engineering and Applied Mechanics

Conference Location : Paris, France

Conference Dates : April 27-28, 2015