عنوان مقاله:

Acceleration and displacement dynamic response spectrum laws of a shallow-buried bifurcated tunnel in soft soil

نویسندگان:

R Nodeh Farahani - *Phd. candidate, Department of Civil Engineering, University of Babol Technology,Babol, Iran*

Gholamreza Abdollahzadeh - *Professor, Department of Civil Engineering, Babol Noshirvani University of Technology, Babol, Iran*

خلاصه مقاله:

In order to obtain the seismic dynamic laws of the acceleration and displacement of a shallow-buried bifurcated tunnel, the analysis of the numerical simulation was carried outby MIDAS-GTS/NX software. The results of the numerical simulation were verified by a shaking table model test. The results show that: (1) the numerical simulation and shakingtable test coincide with each other in terms of variation law and peak value. The results of the numerical simulation are credible.(2) For different tunnel cross-section, the response of acceleration and displacement are significant difference. (3) The seismic response of the small distance tunnel (section 6) isintense. The seismic response laws of the small distance tunnel are significant difference from other type tunnels. The seismic response of the measuring point at the middle rock column is intense. (4) Along the axis of the tunnel, the displacement of the tunnel firstly increases and then decreases. The displacement of the measuring point at the middle rock column is intense, which is in accordance with the law of the acceleration response. The seismic response laws of the tunnel are significantly affected by the middle rock column. The section structure size has a significant effect on the dynamic response of the tunnel performance of underground structures has been gradually attached importance.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1033465