

عنوان مقاله:

Dynamic analysis of embankment dams under strong seismic excitation and a case study

محل انتشار:

چهارمین کنفرانس بین المللی رفتار بلندمدت و فن آوری های نوسازی سازگار با محیط زیست سدها (سال: 1396)

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خلاصه مقاله:

It is a well-known fact that ground motion induced at the dam site by an earthquake located at some distance from the dam can result damages to dams and their appurtenant facilities. Also direct fault movement across the dam foundation can create displacements, which result to more serious problems for embankments and their appurtenant structures. Especially active faults on or near dam sites can cause to damaging deformation of the embankment. Therefore, meaningful seismic parameters are needed to perform a satisfactory evaluation of dam structure. Turkey has so many dams, which are under the influence of near source zone. One of them is Bebekli dam, which has an earth fill embankment having a 34.0 m height Eom river bed, located at the western part of Turkey. A seismic evaluation of dam site was performed in detail. For the dam site, a seismic-hazard source was obtained as based on local seismic events and a ground motion model was produced by means of the appropriate attenuation relationships. The dynamic analysis of 2-D finite element model of dam-foundation system shows that the maximum value of settlement is 58.5 cm on the crest under the loading of Maximum Design Earthquake

کلمات کلیدی:

earthquake, embankment dams, seismic analysis, stability analysis

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