عنوان مقاله:

Seismic performance evaluation of salman farsi dam with considering the influence of sediment

محل انتشار:

چهارمین کنفرانس بین‌المللی رفتار بلندمدت و فن‌آوری‌های نوسازی سازگار با محیط زیست سدها (سال: 1396)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

In this study, a three-dimensional finite element software was used to investigate a concrete arch gravity dam through a nonlinear time history analysis method. The system is subjected to a scaled horizontal component of Manjil earthquake accelerogram and decreasing coefficient of 0.1and 0.6. The lake is modeled with Eulerian elements and nonlinear effects of dam body are included. Besides, the effects of existing interactions between dam, sediment and lake are also considered. The analyseswere done at sediment heights of 0, 2, 5, 10, 25, 50 m under reservoir conditions at normal water levels of 60 m and without water. The results showed that low earthquake accelerograms reduced displacement of dam body. The results indicate that low height sediments in the reservoir could initially increase displacement of dam body, however, as the height of sedimentation is increased, displacements will be reduced.

کلمات کلیدی:

Nonlinear dynamic analysis, Concrete arch gravity dam, Finite element software