

عنوان مقاله:

Effect of Reservoir Bottom Absorption on the Seismic Response of Arch Dams

محل انتشار:

چهارمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1382)

تعداد صفحات اصل مقاله: 7

نویسندگان:

,H. Mirzabozorg - *Department of Civil Engineering, Sharif University of Technology, Tehran, Iran*

,M. Ghaemian - *Assistant Professor, Department of Civil Engineering, Sharif University of Technology, Tehran, Iran*

,A.R. Khaloo - *Professor, Department of Civil Engineering, Sharif University of Technology, Tehran, Iran*

خلاصه مقاله:

The boundary of a dam reservoir would typically consist of alluvium, silt and other sedimentary materials. Over a long period of time, the sediments may deposit to a significant depth in some reservoirs. The influence of the sediments on the static analysis in the dam or on the vibration properties of the dam can be negligible as the sediments are very soft, highly saturated and exert lateral forces only on the lower part of the dam. However, the effects of interaction between the impounded water and the foundation rock would be dominated by, the overlying alluvium and sediments. A hydrodynamic wave impinging on such materials will partially reflect back to the water and partially refract. In this study, the performance of an approximate one-dimensional model for modeling of wave absorption effects on the earthquake response of a typical arch dam is considered. In the modeling, three-dimensional interaction between reservoir and dam is accounted for and a robust time-domain method for analysis of the coupled system is employed. The results show that the effect of the wave reflection coefficient on the seismic response for vertical excitation is more than the other excitation.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/2054>

