

عنوان مقاله:

Height to Diameter (H/D) Ratio Effects on the Seismic Response of On Grade Circular Steel Water Tanks

محل انتشار:

سومین کنفرانس بین المللی پژوهش های کاربردی در مهندسی سازه و مدیریت ساخت (سال: 1398)

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خلاصه مقاله:

Water Tanks are amongst the most important special structures which are used for storage and providing the needed water on the pick usage time in water supply networks. According to this, investigating the seismic behavior of these structures are of much importance. In current research, the seismic response of circular steel water tanks with low and medium H/D ratio is studied, using Lagrangian approach for considering the fluid-structure interaction. Analysis procedure of the whole water-tank system is completed by the means of Time History Analysis method, using 5 pairs of horizontal components of selected accelerograms, recorded on soil categories of Rock, Dense Soil, Loose Soil and Very Loose Soil, scaled to spectral acceleration level of $S_a=0.35g$. The response is computed for the filling strategy of .Empty, 50% Full and 100% Full conditions of both shapes

کلمات کلیدی:

Steel Water Tanks, Lagrangian Approach, Spectral Acceleration, Time History Analysis, Accelerograms

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