عنوان مقاله:

DYNAMIC SOIL-STRUCTURE INTERACTION ANALYSIS UNDER SEISMIC LOADS USING THE SCALED BOUNDARY FINITEELEMENT METHOD

محل انتشار:

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خلاصه مقاله:

The novel scaled boundary finite-element method is a fundamental solution-less boundaryelement method based on finite element technology, which combines the advantages of finiteelement and boundary-element methods. Only the boundary is discretized, no fundamental solution is required, the radiation condition at the infinity is rigorously satisfied. It is the goal of this paper to employ the method for soil-structure interaction analysis under seismic loads. The formulation of the method for seismic loadings is detailed for both bounded and unbounded problems. To demonstrate the application and accuracy of the method as a numerical example a dam located on both rigid and flexible foundations subjected to seismic loadings are simulated by the scaled boundary finite-element method. The results are compared with the commercial finite-element software SAP. Good agreement is achieved

کلمات کلیدی:

Dynamic Soil-Structure Interaction, Scaled Boundary Finite-Element Method

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