

عنوان مقاله:

A METHOD FOR NONLINEAR DYNAMIC ANALYSIS OF PILE-SOIL-WATER INTERACTION IN MARINE STRUCTURES

محل انتشار:

سومین همایش بین المللی سواحل، بندر و سازه های دریایی (سال: 1377)

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خلاصه مقاله:

In the face of rising construction cost and also importance of identifying the exact behavior of marine structures , the increased importance of dynamic loading and the view of the environmental loadings, the occurrence of wave force and seismic effects , becomes a critical questions. One of the most important basis for understanding the behavior of piles in marine structures will be solving the equation of motion by suitable methods for nonlinear effects. The problem of pile-soil-water interaction have three different and nonlinear terms as follows: 1- Differential equation of motion is nonlinear(Because of Morison's equation and effect of water around piles). 2- Pile - soil interaction behavior will be nonlinear. 3- Wave theory that used in this differential equation is nonlinear.(Stokes 5th order theory)[2,4,61. This paper presents a critical working guide to method and associate data for nonlinear dynamic analysis of pile and estimating the effects of waves and earthquake and also presents the simplified methods to modeling structures for applied purposes.

کلمات کلیدی:

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