

عنوان مقاله:

Effect of Diameter on Stress of Buried Pipeline under Seismic Load

محل انتشار:

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خلاصه مقاله:

Nowadays, pipelines have various uses; water and energy supply system, communication services and so on. Furthermore, the pipelines are affected by many type of load like earthquake. This paper has invested stress-strain on the buried pipeline in soil, under seismic load and also effect of pipe diameter on stress and displacement of pipeline. In this study, finite element models of pipeline and soil are established using the package ABAQUS. Material of pipe is steel and its diameters are 300, 700 and 1200 mm and thickness is 20 mm. pipes buried in the depth of 4 meter from ground surface. Seismic load is according to El-Centro earthquake. The results show with increasing in the diameter of pipe, average stress increased too. All stress plots showed stress on pipeline is less than yield stress of steel. So there is no plastic strain. Also with increasing the diameter of pipe, displacement has increased

کلمات کلیدی:

ABAQUS, Pipeline, Seismic Load, Stress

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