

ABSTRACT

Buried Pipelines Used to Transport Gas, Oil and Other Substances Over Great Distances. A Pipeline Transmission System is a Linear System Which Traverses a large Geographical Area, and Thus, May Encounter a Wide Variety of Seismic Hazards and soil Conditions.

The Major Seismic Hazards Which Can Significantly Affect a Pipelines System are . Ground shaking , Differential Fault Movement , Liquefaction and Landslides.

Buried Pipelines Affected by Liquefaction and landslides in Vast Area . These Phenomenons Caused Several Damages on Pipelines and Design Resistant Pipe Due to These Effects Is Very Difficult and Is not Economic.

In These Research We Study the Problem of Dynamic Analysis of Pipes In Ground With Inclined Bed-rock of Buried Pipelines by Earthquake Loading . For obtaining larger Strains in The pipe , The angle of the slope is selected as 45 degrees .

Since , there not liquefaction in this study , the pore pressure and the settlement analysis options in the developed program have not been used and just non-linear responses of soil are investigated.

Computing the maximum ground Strain and Dof at the pipe location in a ground With inclined bed-rock . The FME analysis have been done both for non-linear behavior of the soil and the obtained results are compared and discussed.