

## عنوان مقاله:

Induced Voltage and Current of Electrical Power Line on Adjacent Buried Pipeline

## محل انتشار:

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## خلاصه مقاله:

An effective approach is introduced to apply Transmission Line Model (TLM) to calculate induced voltage and current on a buried pipeline due to electrical power line. The approach can be applied to the parallel or nonparallel pipelines. The method also extended for any complexity system with different conditions and locations of the pipeline. A two ports circuitry network or model is achieved for a parallel pipeline. This two ports network is then modified for each small length, straight and ramped pipeline relative to the power line, which are used for circuitry modelling a complicated configuration of the pipeline. Two numerical services is proceeded to show the simplicity and effectiveness.

## کلمات کلیدی:

induced voltage and current, longitudinal electric field, Carson impedance, propagation constant, Characteristic impedance

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1189608>

