

Electromagnetic Interference Caused by High Voltage Power Lines on Buried Oil Pipelines

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Abstract : The electromagnetic interference caused by power transmission lines to oil and gas buried pipelines is under investigation for many years. Especially during fault conditions, large currents and voltages are induced on the pipelines that may pose danger to working personnel or may accelerate the corrosion of the pipeline's metal. In this research, the induced voltage in the oil buried pipelines due to the magnetic fields produced by nearby 400kV transmission lines have been computed. This effect results in a corrosion process which we have proposed some solutions.

Keywords : C Interference, Induced Voltages, Electric Power Transmission Lines, pipeline, corrosion, cathodic protection.