

Realistic Modelling of HVAC Interference on the Pipelines

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ABSTRACT

The assessment of AC interference levels on metallic pipelines sharing a common utility corridor with overhead electrical power lines is a complex task; which greatly depends on the multiple factors such as soil properties, pipeline characteristics, operating voltages, load or fault currents, tower configurations & their locations, as well as the separation of the pipeline and power line. This paper discusses the assessment of AC Interference levels on a buried gas pipeline due to a 132kV transmission line and the influence of variations in soil characteristics along the common utility route. The AC interference levels with respect to human safety & AC enhanced corrosion are discussed using the applicable industry safety standards.

***Keywords:* Electromagnetic Interference, AC corrosion, Multilayer soil, EMI, Metering station, Coating Stress Voltage, Pipeline Touch Voltages.**