

Diagnosis of the pipeline corrosion due to the inductive interference between high voltage power line and buried pipeline

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Abstract : In this paper, we study the interference between high voltage power transmission line and buried pipeline. The induced voltage onto the pipeline was calculated for the horizontal and the vertical configuration of the power line, the existence of the earth wire, various separation distances between conductors of the power line, and various separation distances between power line and pipeline. This effect results in a corrosion process which we have proposed some solutions.

Keywords : Power lines, interference, induced voltage, induced current density, pipeline, AC Corrosion .