

2014

Impacts of Inductive and Conductive Interference due to High Voltage Power Lines on Metallic Pipelines

M. Ouadah, S. Bouyegh, M. Zergoug, C. Dehchar, B. Boussiala, O. Touhami, R. Ibtouen

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. Even under normal operating conditions, voltages and currents are induced on the pipeline 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 on normal and fault conditions

Keywords : AC interference, Induced Voltages, Electric Power Transmission Lines, pipeline, AC Corrosion