

# SOIL TESTING FOR CONDITION ASSESSMENT OF BURIED MAINS

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## ABSTRACT

The role of traditional soil testing techniques such as resistivity, soil pH, presence of sulphides and redox potential is discussed in relation to corrosion processes and their ability to accurately quantify corrosion rates of buried ferrous pipes. In addition, the role of electrochemical techniques, such as linear polarisation resistance (LPR) technique is similarly discussed.

LPR is considered to be an effective technique in quantifying corrosion rates, whereas utilisation of individual results from traditional testing are considered unreliable and inappropriate, and a combination of the results, using such methods as AWWA-C105, are also of limited value. However, LPR testing needs to be strictly controlled in order to provide reliable and meaningful results. Limitations of the technique are also discussed.

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