

SMOKE AND MIRRORS 2 - WHICH CONDITION ASSESSMENT TECHNIQUES WORK?

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ABSTRACT

The assessment of condition of water mains has become increasingly important in Australia. Several technologies, including remote-field technique (RFT), near-field technique (BEM), ultrasonics (UT), linear polarisation resistance (LPR) soil testing, pressure monitoring and pipeline coating surveys have been successfully used on more than 1500km of steel, cast and ductile iron water and sewer mains in Australia, Hong Kong and Singapore since 1996. Other techniques have also been trialled within this time frame. Although every technique has a solid scientific and technical basis, some cannot be used successfully or meaningfully, due to limitations of the technology. Invariably, techniques require some assumptions to be made in interpreting the results, whether it be with sampling size, material type, coating condition, etc. The validity of these assumptions contributes significantly to the success of the technique.

The successful deployment of techniques needs to be viewed with knowledge of the factors contributing to failure and variability of condition.

Four case histories will be presented to illustrate poor and good selection of methodologies.

Paper Presented at No-Dig Conference, Gold Coast, 2015