

# CONDITION ASSESSMENT OF WATER PIPELINES IN ASIA-PACIFIC REGION

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## ABSTRACT

This paper discusses the increasing requirement for condition assessment of water and wastewater mains in Australia, New Zealand, Singapore and Hong Kong. Various techniques have been employed to determine condition of the mains, and predict future performance. These techniques include Remote Field Technique Mainscan®, Broadband electromagnetic (tesTAU), ultrasonics, Pipe Current Mapping and linear polarisation resistance (LPR) soil testing. The data obtained from these techniques requires special analysis, and is transformed using proprietary algorithms – *EnviroStat* and *PipeFail*. The advantages and disadvantages of a variety of techniques used by the author are discussed in detail.

The results from several projects are presented in detail and discussed. These projects include desktop investigations and field investigations. Important outcomes from investigations include probability of failure and failure regimes, for each main or section of main. In addition, a brief evaluation of the effectiveness of condition assessment is presented.

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