



Case Study Category: CA Int

Case Study Title: Sydney Water's Condition Assessment of a Pit Cast Iron Gravity-Fed Water Pipeline Using Soil Corrosion Testing in Sydney, New South Wales, Australia

Utility Name: Sydney Water

Case Study Abstract: Asset Integrity Australasia Pty Ltd (AIA) was contracted by Sydney Water to carry out a condition assessment on a 500 mm (20 in) diameter pit cast iron pipeline. Six sites were chosen at which to excavate the pipeline and carry out the assessment. In addition to a variety of condition assessment technologies (such as magnetic flux leakage and ultrasonic wall thickness measurement) being used to test the pipeline, the soil properties were tested at each location as a supplementary tool for condition assessment. The soil analysis indicated that the corrosive nature of the soil to ferrous pipes. Linear Polarization Resistance was applied to the results. AIA recommended that Sydney Water investigate the pipelines with high probability of failure further areas further and also monitor the length of the pipeline and opportunistically collect condition data on the pipeline.

Case Study Link: <http://waterid.org/content/sydney-waters-condition-assessment-pit-cast-iron-gravity-fed-water-pipeline-using-soil-corro>