



Case Study Category: CA Int

Case Study Title: Sydney Water's Condition Assessment of a Pit Cast Iron Gravity-Fed Water Pipeline Using Visual Assessment, Ultrasonic Wall Thickness Measurement, and Magnetic Flux Leakage 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. The main was excavated and inspected in six locations visually as well as with ultrasonic and magnetic flux leakage technologies. Wall thickness and corrosion were measured at each location. The results of the inspection were used in detailed structural and statistical analysis. The results showed that a probability of failure in certain areas, especially under a heavy traffic load is high. AIA recommended that Sydney Water investigate the high probability of failure 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-visual-ass>