

Major UK trunk mains trial

Leak location on eleven large trunk mains

Case Study E03

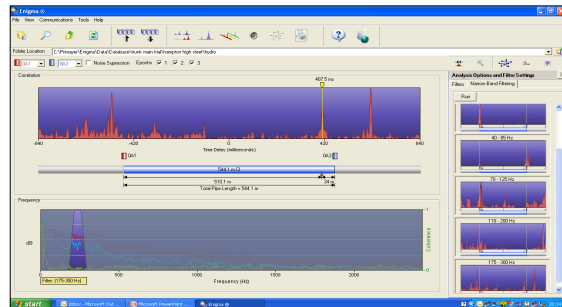
Background

Leak location on large diameter mains is difficult because the pipe becomes more elastic as the ratio of pipe wall thickness to diameter increases. This results in more rapid absorption of leak energy into the pipe material, with resultant attenuation as distance from the leak increases.

Trial details

During March 2009 controlled tests were carried out by a UK water company on large diameter pipes. The objective was to compare the success of available technologies fitted on, or in, the pipe wall.

- Pipes from 300mm - 1500mm diameter
- Seven technology suppliers participated
- Each participating company were given three days (working completely separately) and with water company staff available to support
- High traffic conditions + high background noise – *so real working conditions!*
- Results announced until after all trials complete
- It was later learned ten sites had one or more 'real' leaks – and one site had no leak!



Leak located on 750mm iron main over 544 metres

Results

Enigma and Enigma-hyQ technology gave best results with two thirds of leaks successfully located. Based upon these results the water company has developed a strategy using Enigma technology. On the few installations where this method does not detect leaks a more expensive and disruptive 'in-pipe' methods may be deployed.

Houses of Parliament presentation

Trunk main leak location formed part of a presentation given by Primayer's Managing Director, Roger Ironmonger, to the All Party Parliamentary Water Group in the UK Houses of Parliament during December 2009. Primayer equipment has now found a number of important trunk main leaks around the world including two leaks just outside the Houses of Parliament!



Primayer MD, Roger Ironmonger, meeting Huw Irranca-Davies MP (Minister for Water, DEFRA) in House of Commons (further details on Primayer website)

Close to the Houses of Parliament, Millbank – two leaks on 750mm cast iron

