Severn Trent

High-Speed Pressure Data from Pipe Burst Factors

inflowmatix

Challenge

Severn Trent were suffering a series of high pressure burst incidents within a densely populated area, significantly impacting a large volume of customers and attracting negative publicity both locally and nationally. It was important to identify the underlying cause of the problem quickly. In order to do this Severn Trent selected an innovative approach using high frequency transient monitoring detection analytics.

> **Working with Inflowmatix we have always found them responsive to our needs.**
>
> **Their market leading, high frequency pressure based analytical solutions have identified unwanted transient events providing us with clear actionable insights**

Severn Trent chose to work with Inflowmatix to understand the causal failure across a wide range of variables in order to

Solution

InflowSys™ Data Analytics Platform

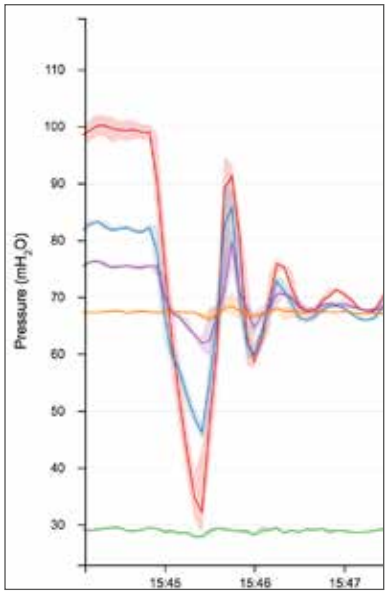
Inflowmatix recognises that traditional 15 minute average data monitoring of a water network is unable to capture the detail of strategic asset performance and the impact on the network infrastructure during large multi event (i.e.pump/booster station/ valve operation) variations in water flow of a network.

By deploying the leading data analytics suite - InflowSys™, high resolution pressure data was captured and analysed in real time to identify transient sources and dynamic pressure variability causing network asset fatigue and hence burst failure. The asset fatigue was measured using the InflowSys™ Cumulative Pressure Induced Stress index (CPIS™) in order to prioritise future potential at risk areas.

Results

The outcomes far exceeded the business case:

- **70% reduction in burst rate**
- **£60k/€70k OPEX repair savings per annum**
- **3 month payback on £12k/€14k improvement costs**



Identified greater efficiency by evaluating the operational investigations that were conducted and monitoring how these were resolved to improve the network performance.

INFLOWSYS™

A next generation data analytics suite consisting of; an array of smart devices (sampling at 128 samples/s, 0-20 Bar pressure with 0.1% full scale accuracy), analytics platform and visualisation developed by Inflowmatix.