

Pump Performance

Monitor and manage asset performance in real time

The Problem

One of the challenges facing water corporations is operating and maintaining assets in a way that maximises efficiency and minimises maintenance. Monitoring pump performance is a common example.

By comparing a pump's performance against the manufacturer's pump curve, we can see whether an asset is performing well, and make informed decisions about how to operate, whether to maintain, or whether to replace an asset.

We can compare the performance of a fleet of pumps across the business to look for anomalies and even compare pumps across corporations to collaboratively develop asset management strategies.

Our objective is to demonstrate that asset performance can be measured, monitored and templatised in real time using the PI System.

The GTS Application

The Application collects data from local control systems some of which were variables in the efficiency calculation. The PI System provides user-configurable analyses allowing us to configure a pump efficiency calculation and compare performance with the manufacturer's pump curve in real time.



The 'raw' operational data together with analysis results are presented in a dashboard allowing users to see current performance, performance at different speeds, and performance over time at a glance.

The Benefits

The application shows asset performance calculations can easily be implemented and templatised in the PI System creating efficiency in asset analysis compared to current manual processes; and more importantly providing the information and visibility needed to support tactical and strategic decisions.

Asset managers can see pump performance in real time, as well as looking back historically for example, to look for gradual degradation in function.

Visibility of pump condition and operation drives intelligent asset maintenance decisions and delivers savings. We expect to see reduced maintenance costs and more effective strategic capital expenditure decisions informed by data:

- When does it make sense to do maintenance?
- Was the maintenance effective, how much better is the pump running, or did it introduce an issue?
- When should an asset be replaced?

It demonstrated a straightforward example of the capabilities provided by the PI System are extensive:

- Raising alerts on underperforming assets
- Integrating with maintenance systems to show maintenance history in dashboards or create work orders based on asset condition
- Comparing asset performance across water corporations to benchmark pump performance through templatised applications

Real time asset performance monitoring enables benchmark comparisons of pump effectiveness within and between businesses. This will optimise maintenance and reduce operational costs.

