Masoneilan

a Baker Hughes business

Case study

Eliminate Carbon Footprint Before it Happens...

Valve Lifecycle Management (VLM)

Eliminate Penalties

$100K+

With proactive detection (1)

Improved Maintenance Utilization

+10%

By reducing the labor hours spent on proactively monitoring valves (1)

(1) Savings & reduction vary by application

Contact your local Masoneilan representative to learn more about Valve Lifecycle Management and ValveAware Advanced Valve Diagnostics.

Reducing carbon footprint goes further today than managing emission discharged from stacks. “Fugitive emissions”, or emissions leaking from equipment, are often undetected until agencies, such as the Environmental Protection Agency (EPA), identify the unsuspected sources through inspection and invoke stiff penalties.

THE CHALLENGE

Thousands of valves are used in plants to control volatile process fluids and greenhouse gases. These valves constantly throttle with **wear-inducing motion, deteriorating packing seals and causing leakage points**. Government agencies, such as the EPA, invoke requirements, such as the Clean Air Act, to set restrictions on VOC (Volatile Organic Compounds) emissions. **Violations of these acts are punishable through fines and settlements that involve costly upgrades** for detection and prevention.

THE SOLUTION

Low-emission packing are great solutions certified to minimize your carbon footprint, but over time the best solutions should also **include advanced diagnostic detection, such as the Masoneilan™ VLM diagnostic services to monitor performance**. Troubleshooting friction errors can be as easy as turning a wrench once you are aware of the problem!

With friction detection algorithms, performance trends are monitored and used to predict an increase in potential fugitive emissions before it occurs. **Easy to read VHI (Valve Health Index) meters** identify problematic indicators, such as changes in packing friction, which can lead to undesirable effects.

As packing slowly wears over time, friction is reduced and can become a leak point as the seal effect is reduced. Often, maintenance crews may respond by over-tightening the packing box in attempt to minimize emissions. Over-tightening can cause a ‘stick/slip’ effect under higher than desired friction, which is measured with RMS (Root Mean Square) Error to quantify the impact. **Masoneilan ValveAware™ diagnostics, and Emission Inspection & Management Services are a great way to stay ahead** of failures before they occur!

VHI (Valve Health Index)

Legend

Good health | Average health | Poor health

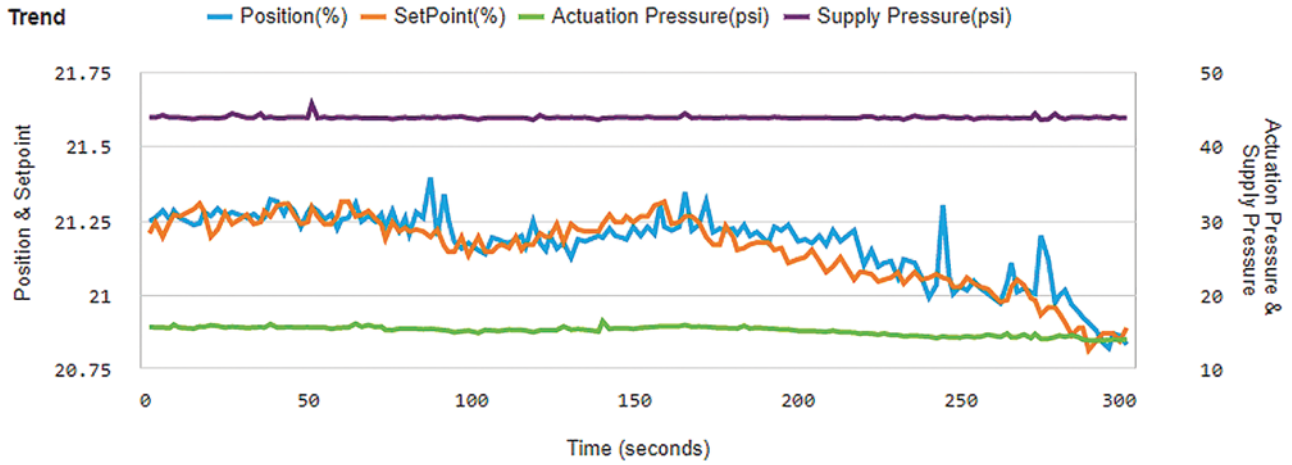
VHI **Contributors:** Valve is Healthy

Most Recent Test

Friction	0.65 psi ⚠
Friction %	2.7% ⚠
RMS Error	0.33

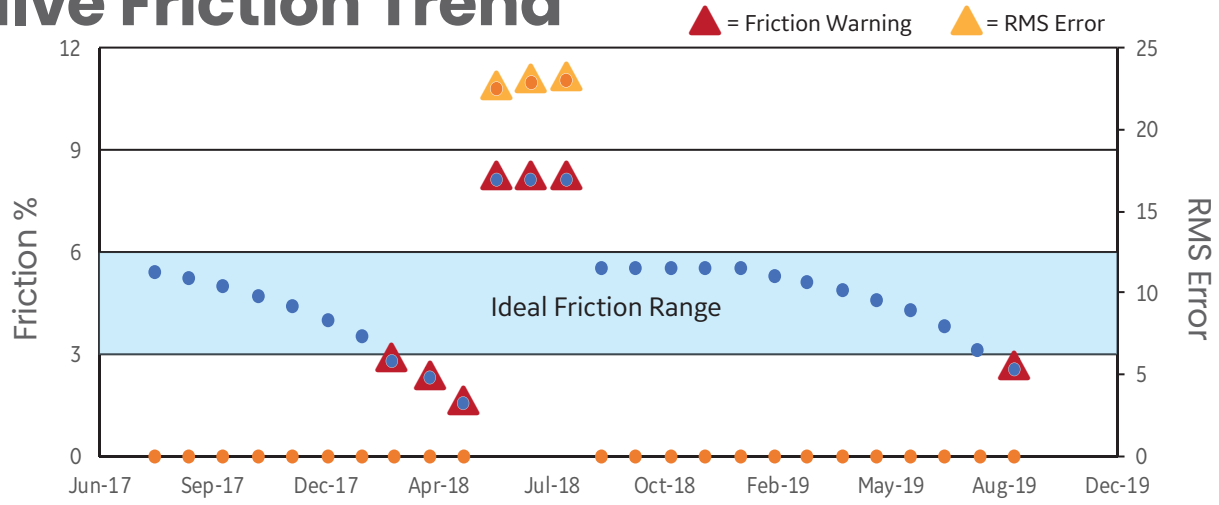
Valve stable in normal operation, but low friction alert flags the valve may be a candidate for fugitive emissions.

Control Performance



Valve is responsive and tracking closely to set point for precision control. No outliers identified.

Valve Friction Trend



Packing friction reduction observed over time. May '18 Technician over-tightens packing and increases RMS error. Aug. '18 packing loosened to improve RMS. Aug. '19 Alert for low packing friction - potential for fugitive emissions.