



USE CASES

STATEMENT

- This slide deck is continuously updated with use cases for our valve position sensor brought to us by our esteemed customers. For obvious reasons we are not allowed to name customer names, site locations and quantities.
- This update is from Jan 2024, please contact us at info@aloxy.io for the latest version.

Aloxy Manual Valve Position sensors

Industries : Refineries, Chemical plants, Tank storage terminals, Upstream operations, Gas distribution.

Manual valve position sensors find their use across a variety of industries, helping solve a long lasting painpoint in the industry. Having the real time valve position data at hand can highly contribute to safety and efficiency goals by their versatile use. Using the latest low-power wireless network technology, LoRaWAN, high numbers of these sensors can be easily deployed across a production area.

The data is processed centrally in Aloxy's cloud based sensor platform: Aloxy IIoT hub which can be coupled to customers' systems to display the data where they need it. Following ATEX and C1D2 regulations, no valve can be left unchecked.



1

SAFETY

INCREASE PROCESS SAFETY BY ADDING A RELIABLE DIGITAL LAYER TO YOUR MANUAL VALVES.

2

EFFICIENCY

INCREASE UPTIME BY REDUCING ERRORS RELATED TO MANUAL VALVES.

3

COST EFFECTIVE

LOW COST SOLUTION EASY TO SCALE GLOBALLY AND QUICK TO INSTALL ON ALL TYPE OF VALVES.



Isolations

Make sure equipment is safely isolated during maintenance or shutdowns.

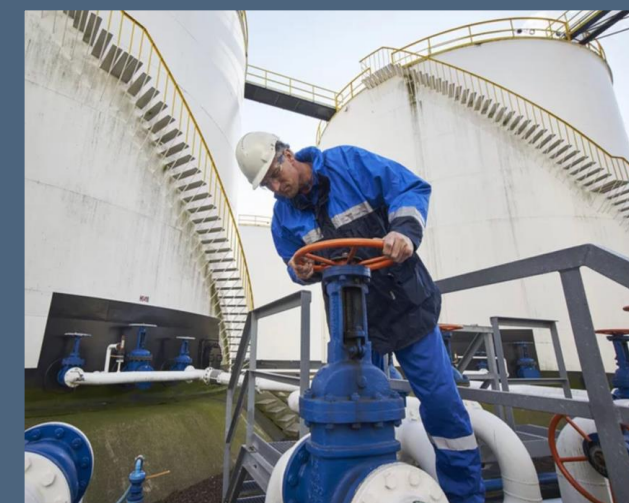
Emergency showers

Monitor use of unconnected emergency showers and digitize safety reports.



Alert wrong operation

Ensure that valves remain in their safe position: block valves of PSV, drain on Ammonia pipelines, etc...



Tank Line up

Ensure that valves are **correctly lined-up** in tank farms to prevent cross contamination or spills.

Fire Hydrant monitoring

Perform real-time monitoring of the fire hydrant system across the whole site.



IloT Benefits The Whole Organisation

End users



Process safety



Maintenance



Utilities



**Operations &
production**



Reliability



Fire safety

Facilitators

Digital transformation /IloT

Electrical and instrumentation

IT/OT

What KPI's Are Influenced?

End users



Process safety

Increase of safety :

- less incidents and accidents expressed by reducing amount of % of manual valves at root cause

Decrease of spills in environment

- Decrease of costs for cleanup



Maintenance

Increase in uptime

- more production output in €
- Less € spend

More efficient isolations

- Less time spend expressed in € as hourly rates



Utilities

Savings on raw materials :

- More efficient usage of materials in € spend



Operations & production

Contamination :

- Loss of product in €
- Loss of time while cleanup and no availability of tank in time and €
- Loss of customer in €
- **Increase in uptime:** more throughput in €



Reliability

Decrease of asset breakdown

- Increasing uptime of production
- More datapoints for root cause analysis



Fire safety

Better overview of hydrant network

- Increase in availability of hydrants during calamity

Facilitators

Digital transformation

Electrical and instrumentation

IT

A low-angle, blue-tinted photograph of a complex industrial piping system. The pipes are arranged in a dense, crisscrossing pattern, with several large valves featuring handwheels. A yellow triangular warning sign with the letters 'EX' is visible on one of the pipes in the upper right. The overall scene conveys a sense of industrial scale and complexity.

Use Cases

Process Safety

And operational efficiency

Use case: tank lineup

Industries: Storage terminals, refineries, chemical manufacturing

Department: Operations

Industry challenge

- Line up procedures include both automated and manual valves causing frequent incidents because of wrong valve positions.
- Because of the frequency of line up procedures switching between tanks, loading bays, and pumps, the average storage terminal has frequent incidents.
- Terminal throughput is inefficient because of these incidents and additional

Solution

The Aloxy valve monitoring sensor provides real time insights in the manual valve position and can be integrated with “line up software” to make sure all valves are in the correct position before moving product

Benefit

- Prevents spills, leaks, and contamination
- Increases terminal throughput
- Increases overall terminal safety for operations



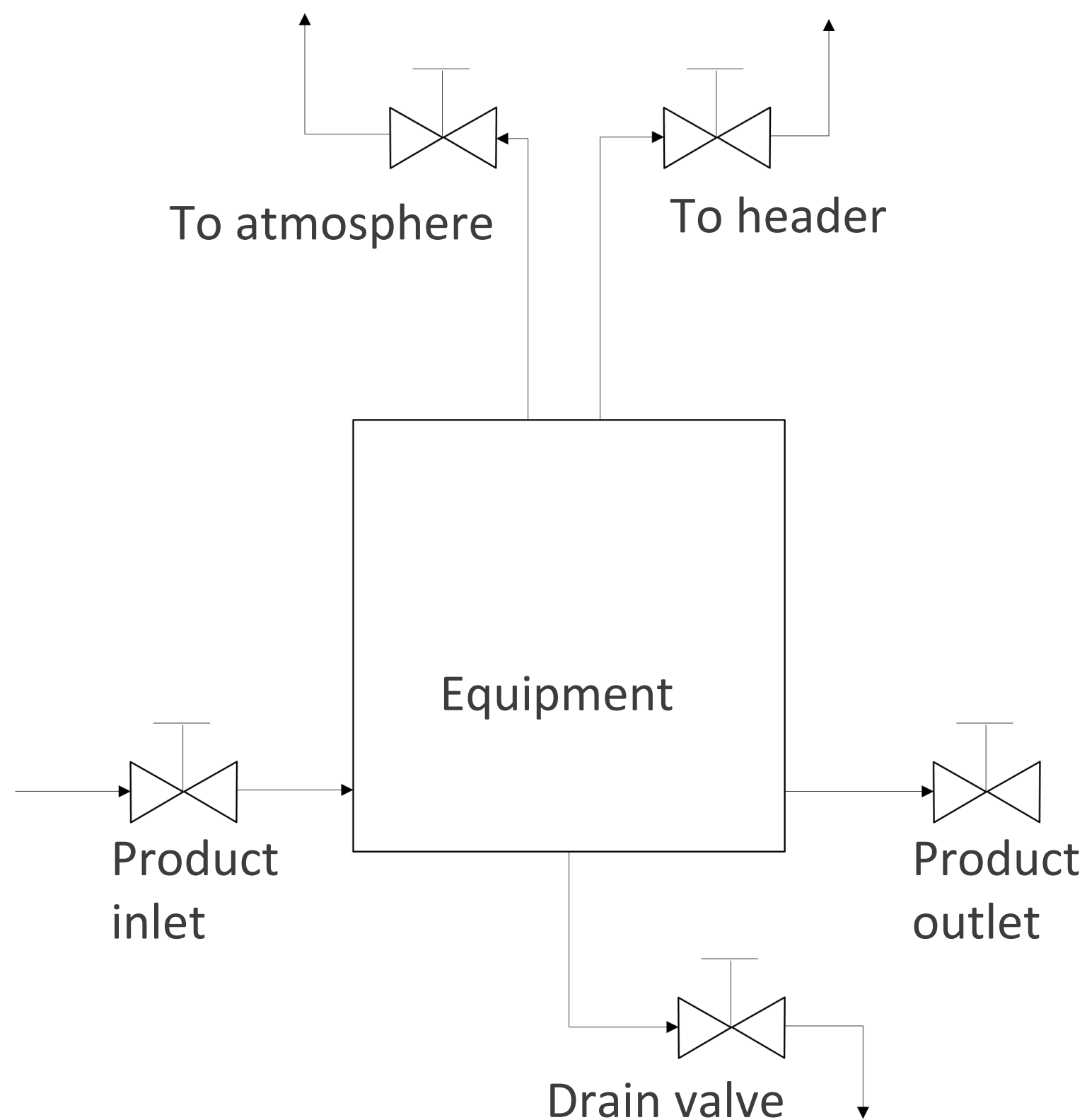
Use case: prevent hydrocarbon releases

Industries: Refineries, chemical industry, upstream operations

Department: Operations, maintenance, HSE

Industry challenge

- Vents and drains can be accidentally open while product inlet is open resulting in hydrocarbon releases or spills

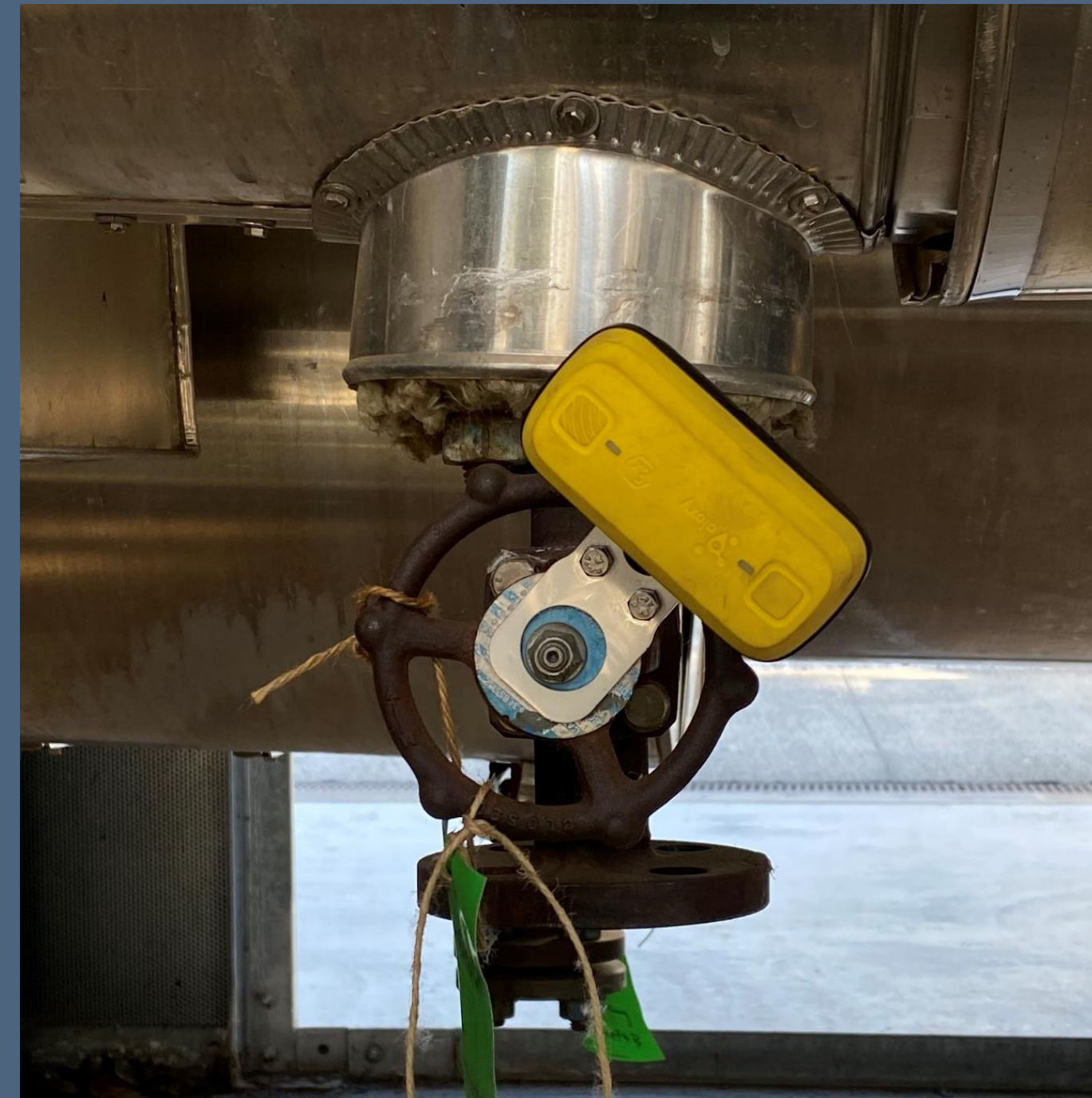


Solution

Before the process is started up the Aloxy valve position sensors are used to double check whether the vent and drain valves are fully closed. Additionally, sensors can be equipped on the product inlet and outlet line to have full confirmation whether the production shut off before starting the maintenance.

Benefit

- Less Hydrocarbon releases to atmosphere (or other products)
- Less spills
- Resulting in overall more sustainability





Want to see the full presentation?

Book a meeting with your dedicated contact person what use cases are relevant in your industry.



Connor.johnson@aloxy.io

North and South America



Michael.mayer@aloxy.io

North and South America



Andres.nagels@aloxy.io

Europe



Frank.gielissen@aloxy.io

Asia and Middle East

	Regular events	Several events	Occasional Sporadic events	Seldom Infrequent events	Unlikely Improbable events
Severity					
Catastrophic Unacceptable					
Critical Severe					
Moderate Minor loss					
Negligible Minimal					



THANK YOU