

Asia Refinery Adopts Valve Condition Monitoring to Detect Potential Failures

RESULTS

- 98% nuisance alerts were reduced, focusing on more important alerts.
- \$500k saved from potential loss due to early detection.
- Increased AMS utilization from yearly to weekly with minimum workload.



APPLICATION

Valve Condition Monitoring on critical valves.

CUSTOMER

Asian petroleum company

CHALLENGE

The customer operates over 10 refineries and plants in Asia. One of these refineries has been operational since the 1960s. In 2008, AMS Device Manager and ValveLink™ software were installed in the plant which is connected to 144 critical control valves. Despite utilizing AMS and ValveLink for early detection of potential failures, the plant was evaluating the data on an annual basis only.

Though the site was provided with the data from the diagnostics collected, they lacked the expertise needed to interpret the data so it was not frequently used. Most importantly, an average of 1,000 nuisance alerts were received per month, causing alert flooding that hid potential critical failures. The customer concluded that it was impractical to sustain an alert monitoring program while only utilizing in-house resources.

Whether you're dealing with hazardous areas, time-critical turnarounds, or long distances between valve locations, Emerson has engineering experts to help you leverage today's connected IIoT technologies.

SOLUTION

The customer worked with Emerson to implement a trial for Valve Condition Monitoring, a service included in the Connected Services portfolio. To implement the service, a roadmap was created to align with the customers' specific business goals.





Next, the alert threshold was optimized and a service work process was drafted that illustrated the trial for Valve Condition Monitoring. In a one-month period, Emerson service staff visited the site and collected data on a weekly basis. Alert analysis for the top 5 critical valves was performed and settings were optimized to focus on the most important alerts. This reduced alerts from 1,674 alerts per month to 39 alerts per month, a 98% reduction in monthly alerts.

The last phase of the trial involved minor modifications on the existing network and setting up an AMS Client on the Microsoft Azure Cloud environment. Emerson's analysts remotely accessed the valve data collected to review alerts on a weekly basis. Emerson's analysts recommended actions based on OEM product knowledge and application expertise, which helped augment the customer's onsite staff.

These activities validated the feasibility of the service architecture in terms of hardware and software, helped to determine what else is needed to fully maximize the Valve Condition Monitoring service, and optimized the execution of remote monitoring and reporting processes. Due to the success of the trial, the customer will expand monitoring on more critical valves and will implement more opportunities of valve health analysis.

To learn more about Valve Condition Monitoring, visit [Emerson.com/ValveConditionMonitoring](https://www.emerson.com/ValveConditionMonitoring)

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