

Eltav Case Study – PQ Corporation Saves Operational Costs with Eltav’s Wireless Valve Predictive Diagnostics

The Challenge

PQ Corporation is a leading producer of silicate, zeolite, and other performance materials serving the detergent, pulp and paper, chemical, petroleum, catalyst, water treatment, construction, and beverage markets. It is a global enterprise, operating in 19 countries across five continents.

Valves in PQ’s production lines in their Augusta, GA plant - frequently required break-fix maintenance due to corrosion and general wear and tear. Replacing or repairing such faulty valves sometimes resulted in costly shut downs and the loss of valuable production time.

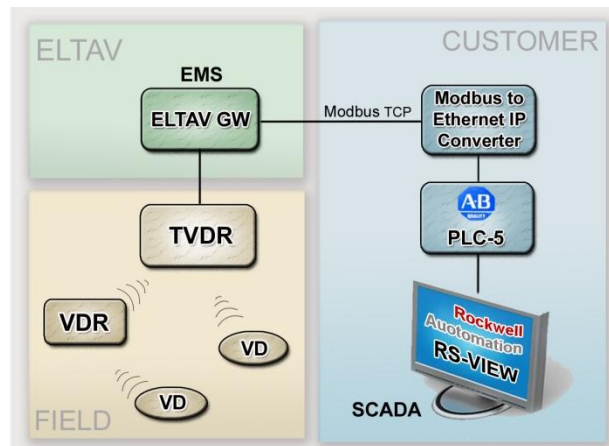
PQ sought out a system that delivers real-time information about the status of valves to minimize unexpected failures. Their requirements included a system that would be integrated into the existing industrial process control systems and would not require a major installation effort upsetting daily production.

The Solution

Eltav deployed an initial installation of 24 Valve Device (VD) units on PQ’s FlowServe actuators.

The Eltav Management System (EMS) – the central management and control application of the Eltav Wireless Valve Monitoring System – immediately provided detailed information about faulty actuator status and activity. For the first time, PQ’s management had a comprehensive picture of all valve activity.

Eltav’s Wireless Valve Monitoring System Diagnostic Feature indicated that 40% of PQ’s monitored actuator/valve sets did not operate at full efficiency and required maintenance. Two actuators were found to be at the point of becoming totally defective. Eltav’s Diagnostic Feature triggered preventive maintenance action, thus avoiding failure.



Solution Architecture

How Eltav Did It

The entire installation of the 24 Valve Device (VD) units and their respective routers took *only* 4 hours, and in no way interfered with the continuous operation of the plant.

Valve Devices (VD) are small, self powered devices, bracket mounted directly on the valve or actuator, that transmit valve position in a wireless manner. **Valve Device Routers (VDR)** collect data from up to 32 associated VDs and transfer the information through the wireless network to the control center. Data transfer redundancy is assured by automatic routing of the wireless devices.

Diagnostics is a software feature that detects abnormal valve or actuator dynamics. This information is the basis for preventive action.



Eltav’s VD Installed on an Actuator

The Eltav **Operator's Device (OD)** – a portable, hand-held device that enables the operator to communicate with the Eltav System in the field, using wireless low frequency communication – provides rapid initial configuration and calibration during installation, as well as field reading of the VD's data.

PQ's Feedback

PQ has summed up their experiences with the Eltav team and the benefits of the Wireless Monitoring System and provided the following feedback:

- The Eltav Wireless Monitoring System is simple to deploy and operates flawlessly.
- The proven preventive maintenance capabilities of the system are a major factor for selecting it.
- The installation quality, data accuracy, infrastructure performance, communications reliability and VD battery status features are particularly impressive.
- When compared with conventional solutions or competitive offerings, the Eltav total cost of ownership and ROI are particularly attractive.
- PQ gives substantial importance to cultural values such as professionalism, integrity, fairness, diligence, service, and a strong spirit of teamwork. The Eltav team displayed similar principles when working at the Augusta plant.
- PQ appreciated the fact that Eltav took their comments and requests seriously and felt that the two companies share the same goal – to make this deployment a real success.
- The Eltav system is transparent to the operator in the control room. It appears the same as any other valve.



Configuring a VD using the Eltav OD

The following are typical comments we received from PQ staff:

- Area owner: "I could not have asked the installation to work any better".
- Software engineer: "No issues from start to finish".

The Future

PQ management stated their satisfaction with the Eltav system as presently installed. They affirmed that the installation of the Eltav system improved production yields. In short, the system is running very well and fulfills their expectations.

PQ is currently identifying the next areas where they will install additional Eltav equipment.

About Eltav

Eltav Wireless Monitoring Ltd. is focused on offering a revolutionary concept of remote **valve monitoring** in the process plant.

Eltav has developed an innovative concept of **monitoring valves** in the process automation world using the most advanced, safe and reliable **wireless technologies**.

Eltav's wireless remote monitoring is based on low cost wireless units, called **Valve Devices (VD)** which transmit real-time data on the position and other parameters of the valve, thus enhancing yield and productivity.