

OneWireless™ Valve Position Monitoring Solution Helps Refinery Prevent Product Contamination Resulting in \$400K per Annum of Production Loss Avoidance



Industry Applicability:

Chemicals
Refining
Oil and Gas

Results

- \$400K annual indirect savings by maintaining the right valve flow coefficient to prevent contamination, which can result in an unusable product or having to sell the product at a lower price.
- Improved operations and safety by accurately monitoring manual valve position in real-time, enhancing disaster recovery capabilities while reducing the need to have workers in the field.
- \$50K of installation cost savings (hardware and labor) compared to a wired alternative.
- Improved efficiency of scheduled maintenance due to electronic tagging of all valves in the system.
- Wi-Fi and Ethernet coverage available in the field. The site is planning to implement the OneWireless Video and OneWireless Mobile Workforce Solutions to further reduce the wireless infrastructure payback period.

Challenge

Manual valves are a core part of instrumentation and control deployment in the process and manufacturing industries. The traditional technique used to monitor the position of a manual valve is to have operators check the position in the field and radio back the valve status.

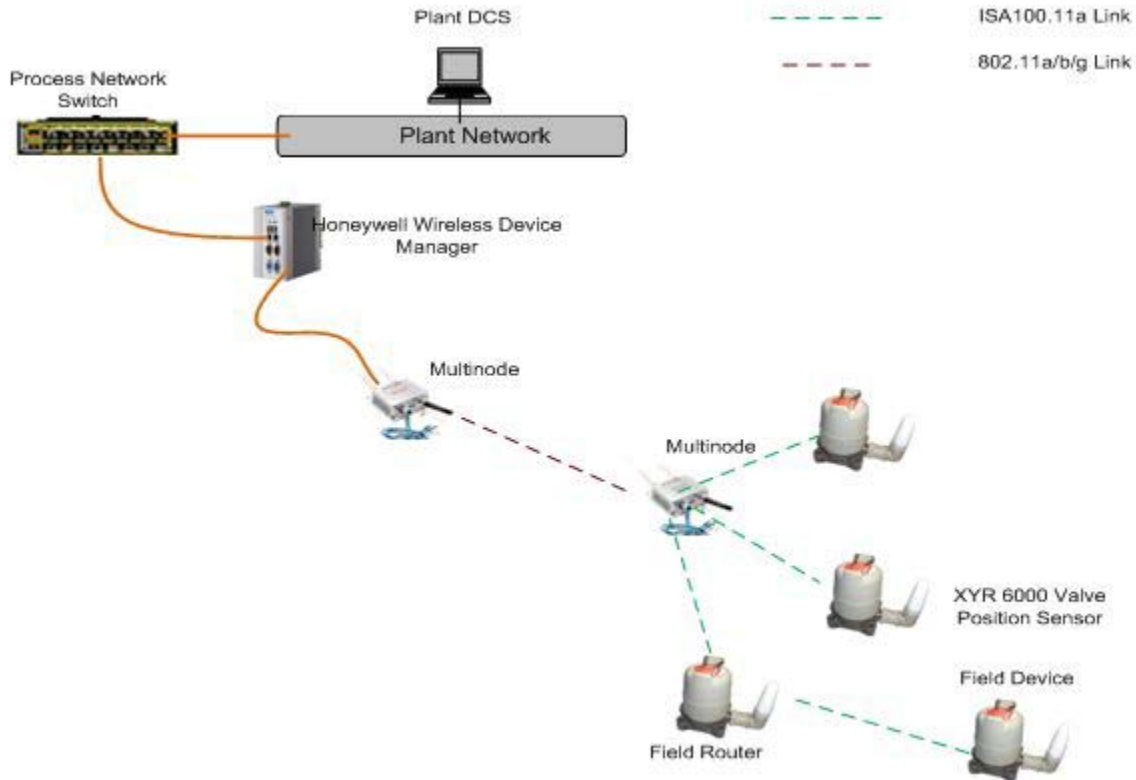
The major customer challenges for manual valve monitoring include:

- Human errors resulting in product contamination, lower operational efficiency and safety, or environmental risks due to operation of manual valves without feedback to a central control room.
- Time-consuming process to align valves to handle oil movement. Needed to minimize near misses and incidents by reducing the number of operator rounds required to perform the monitoring of manual valves in the remote tank farm area with hazardous environment.

Solution

The plant identified wireless as a cost-effective and reliable technology to be used within its operation. A OneWireless™ system consisting of multinodes, a Wireless Device Manager and XYR 6000 wireless valve position transmitters was installed.

- **XYR 6000** wireless valve position transmitters are battery-powered wireless transmitters that are installed on the manual valves. These field instruments eliminate the troublesome wiring and engineering associated with any wired field instrument. A **multinode** is an industrial meshing access point which provides wireless coverage for ISA100.11a field instruments and Wi-Fi devices. The multinode routes received data from wireless field instruments and Wi-Fi clients to and from the host applications.
- **Wireless Device Manager** is a Distributed Control System (DCS) module that manages all ISA100.11a field devices. It also hosts the various interfaces needed to route data from wireless field devices to the control system (e.g., Modbus, OPC, and HART). A Modbus interface was used for this application.



Why Honeywell?

The customer selected OneWireless because of the system's performance (e.g., one-second update rate for wireless field instruments and longest transmission range), flexibility (e.g., sensor mesh or multi-application topologies) and lowest cost of ownership (e.g., off-the-shelf batteries and longest battery life in

the market). OneWireless also offered a faster system commissioning time than a wired system with no impact on production. Finally, the plant wanted a proven system.

More Information

For more information on Honeywell's wireless solutions, visit www.thewirelessplant.com or contact wireless@honeywell.com.

OneWireless™ is a trademark of Honeywell International Inc.

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