

Wireless Tank Monitoring: Gain Operational Awareness & Save Money

Tanks are vital to businesses - from farming to restaurants to water treatment and more - that need safe, reliable storage for water, milk, fertilizer, grain, mineral, raw material and combustible fuel supplies. No matter what substance a tank contains, up-to-date knowledge of its status and condition is essential. Proper tank monitoring promotes overall operational awareness, stability of product and the safety of those around the storage tanks. Wireless tank monitoring technology can make a dramatic positive impact. When properly implemented it improves efficiency, helps ensure safety, limits downtime created by low supply and ultimately reduces costs.

What is Tank Monitoring?

Tank monitoring is the ability to remotely monitor a tank or tank farm, including real-time response to alerts for content stability, tank levels and changes to structural integrity.

Tank monitoring technology gauges:

- Fill status
- Location
- Content stability
- Gas types & levels
- Temperature
- Pressure
- Tank structure
- History of servicing

Some tank monitoring solutions offer web dashboards that display all these readings and insights in one portal that includes a set of actionable steps to optimize tank operation.

This technology enables business owners to understand exactly what's going on with their tanks at any given time. This precise, timely knowledge empowers them to take required actions at the right time, be it the need to fill a tank, reduce its pressure, repair it or be alerted to theft and/or tampering of contents.

Control Inventory and Costs

Tank monitoring can dramatically reduce costs and downtime and improve safety, starting with in-time filling. Filling tanks is par for the course in many businesses. But in many cases, when the fill level drops too low, the refilling process takes significantly more time and effort, in part due to the need to restart systems that depend on minimum tank levels and content concentrations to operate.

Wireless monitoring also allows for tanks to be serviced only when needed, and also allows for route optimization when they do. For instance, level monitoring allows technicians to skip tanks that don't need filling, while ensuring that no tank drops below critical levels. This saves time on filling and ensures maximum tank uptime.

Distributors who service and fill tanks can use the insights garnered from tank monitoring to create custom services for their customers, giving themselves a competitive advantage.



Real-time and Remote Troubleshooting

Since tanks are often in out-of-reach places, offsite or even underground, a massive amount of money can be lost to leaks or other maintenance issues before they can be caught. Real-time troubleshooting enabled by tank monitoring can alert tank owners to these issues right away.

Sensors can be placed on any kind of tank to report on changes to the internal state of the tank (such as pressure and gas concentrations) and content levels. Web-based dashboards make it easy to see issues and alerts in real-time as they arise.

Wireless tank monitoring can even permit remote troubleshooting. Some systems allow tank owners to trigger valves and exhaust remotely to solve volume or pressure issues. This allows them to solve some problems without visiting a tank in person—or worse, digging an underground tank up to inspect it, at significant cost.

Case Study: Food Manufacturing¹

In one successful use case for tank monitoring, a tortilla manufacturer used the technology to measure cooking oil stored in tanks outside the factory. In the past, these measurements were taken manually; technicians estimated tank volume by looking at exterior gauges. This process was inefficient and imprecise, resulting in wasted stock even with frequent follow-ups.

The manufacturer implemented a wireless sensor control system to automate tank monitoring. This ended the need for frequent manual measurements of cooking oil, saving time, money and effort. The manufacturer also configured the system to generate automatic emails to vendors when levels reached a certain threshold, prompting them to reorder standard deliveries of cooking oil or remove used oil. As a result, the manufacturer increased efficiency and promoted smooth and continual operation of the business while reducing overall costs.

Tanks are one of the last things many businesses think about, but inefficient tank usage or maintenance issues can quickly eat into profits. An effective remote tank monitoring system can be a significant competitive advantage for modern businesses.

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Source:

1. Processing Magazine, 2017. Available at <https://www.processingmagazine.com/advantages-wireless-tank-level-monitoring-systems/>.