Cross Company

Moderniizing Water Usage Tracking in Automotive Manufacturing

A major automotive manufacturing facility in Alabama was looking to replace its legacy ultrasonic flow meters used for domestic water monitoring. To improve departmental usage tracking and operational efficiency, the plant partnered with Cross Process Solutions to implement a high-reliability, non-invasive flow measurement solution. By deploying Katronic KATflow 100 meters with Modbus TCP/IP connectivity, the facility achieved full integration with their existing SCADA system, providing real-time visibility across multiple production departments.

The Challenge:
The facility had relied on 15-year-old ultrasonic flow meters to track water consumption across its sprawling campus. Over time, these aging units became unreliable, leading to signal dropouts and inconsistent data. The Facilities Engineer required a replacement solution that met three strict criteria:

1. *Non-Invasive Installation:* The ability to install meters without cutting pipes or interrupting water flow to critical production areas.
2. *Digital Integration:* The meters needed to communicate directly with an Eaton Foreseer SCADA system to populate a custom dashboard.
3. *Departmental Granularity:* The plant needed to track water usage specifically for areas like stamping, welding, painting, and engine assembly zones to better manage operational costs.

The Solution:
After a quick, successful onsite demonstration using a portable Katronic unit, the facility went with the KATflow 100 for a full-scale 10-unit rollout.

Key Technical Advantages:

- *Ease of Setup:* The clamp-on transducers allowed for installation in under 30 minutes per unit.
- *Modbus TCP/IP Communication:* This protocol allowed the plant to transmit flow data directly into their custom Eaton dashboard.
- *Consistency Across Models:* Because Katronic uses a standardized menu structure across both portable and fixed units, the transition from the initial demo to the final installation was seamless for the plant's crew.

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Engineering & Commissioning:
Cross provided more than just hardware; we provided the technical bridge between the new meters and the plant's infrastructure.

- *Pre-Installation Training:* While the units were on order, Cross conducted onsite training with the facility's installation crew to ensure they were comfortable with transducer mounting and menu navigation.
- *System Verification:* Cross joined the crew for the first day of installation to verify the first two units, ensuring signal strength and data accuracy before the plant completed the remaining eight.
- *Technical Troubleshooting:* Cross identified and resolved minor configuration issues during commissioning—such as conflicting IP addresses—ensuring the Modbus registers mapped correctly to the SCADA system.

The Result:
The facility now has 10 high-accuracy nodes tracking water flow in gallons per hour (GPH) and gallons per minute (GPM). This data allows the Facilities Engineer to:

- *Monitor Total Consumption:* Track monthly usage across the entire plant.
- *Departmental Accountability:* Accurately attribute water costs to specific manufacturing departments (stamping, welding, etc.).

By partnering with Cross to move away from obsolete technology, the plant has secured its water data for the next generation of manufacturing. If your facility is facing equipment obsolescence or struggling to integrate legacy flow data into modern SCADA dashboards, contact Cross Process Solutions today to discuss our non-invasive measurement and integration strategies.