

TECH FEED

Water Plant Upgrades: Four Reasons To Break The Re-Order Habit



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A large percentage of the flow meters purchased for municipal water plants are replacements for older meters in existing facilities or distribution systems. It's a common practice to replace aging meters with the same technology, often from the same manufacturer.

That might not always be the best decision. With newer flow meter technologies now on the market, you might want to think about breaking the "re-order" habit for several reasons. Why not consider the benefits of a newer alternative flow meter technology?

While all flow meters have their performance advantages and disadvantages, choosing the right one depends on the specific fluid and application. Flow meter suitability varies widely with different types of fluids (water, steam, gas), the industry and the plant environment.

Here are four reasons why you might consider choosing a newer water flow meter technology for your next plant upgrade project, instead of sticking with the same old meter:

1. Venturi meters have a limited operating range. They are bulky (roughly twice as large as any other meter for the same application) and expensive: In large pipe installations, they require service shutdowns, big cranes, welding and lots of labor.
2. Pitot tube and averaging pitot tube meters with their orifices are prone to residue buildup in the tube ports, which degrades accuracy and repeatability over time.

3. Ultrasonic flow meters are affected by suspended particulates, gas bubbles, surface scaling and the acoustic properties of fluids: temperature, density, and viscosity.
4. Turbine meters have moving parts that are susceptible to wear and a lot of maintenance.



Figure 1: Installing a full-bore electromagnetic meter

For these reasons, newer technology electromagnetic flow meters are growing in popularity because of several advantages:

1. Mag meters offer sensing across the full diameter of the pipe with excellent accuracy of ± 0.5 percent over a wide flow range--even in turbulent or variable flow conditions.
2. Mag meters are available in either inline or insertion style configurations. In large line

sizes, the insertion style mag meter is much simpler to install—up to 45% less expensive over traditional full bore mag meters (See Figure 2).

3. With mag meters, there are no moving parts: There is nothing to wear, break or clog; and so there is virtually no maintenance, providing both a low installation cost and excellent return on investment (ROI).

4. McCrometer manufactures both the inline Ultra Mag® Flow Meter and the insertion style FPI Mag® Flow Meter - We can help you choose the best meter for your application.



Figure 2: Installing insertion style mag meters such as the McCrometer FPI meter instead of Venturi and other full bore meters eliminates the need for line shutdowns, heavy equipment and extra labor costs.

Before selecting your next flow meter, be sure to evaluate all the flow technologies. An “essentials” list of meter evaluation criteria should include the following items:

- Sensor technology
- Accuracy, repeatability
- Ease of installation
- Maintenance requirements
- Total installed cost
- Lifecycle cost (with maintenance)

Of course, there is a lot more to learn about flow meters from the innovative leaders at McCrometer, who are the industry flow experts. Call 800-220-2279 or visit us online at www.mccrometer.com.

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