

Onsite Check Metering

By Brian Roughan

When a flowmeter in operation has to be verified, it usually has to be removed from its location and transported to a facility where the necessary verification or check metering can take place; however, an onsite verification device makes this task faster and easier for a fraction of the cost. Using the right meter can yield results as accurate as any offsite verification.

Portable check metering kit enables verification of virtually any flowmeter

Many process plants within the water and wastewater industry have installed flowmeters to ensure efficient operation. They are located in strategic positions where they feed control systems with vital flow rate information that can be used as a base for adding or dosing chemicals, as well as measuring the water consumption or the efficiency of the installation. Optimal performance is required to secure growth and sustainability; if an application is not performing at its best, it can cause the plant to lose money. For example, an undetected leak in a large distribution pipe carrying purified water can amount to large financial losses.

Offsite vs. Onsite Verification

In order for plants to operate efficiently, the plant manager must be certain that each flowmeter is operating 100% correctly. Upon delivery, meters are usually calibrated; thus, the operator can be sure that they measure correctly.

Therefore, an onsite verification of the flowmeter is very beneficial. When performing such a task, a portable measurement device is used to verify the performance and accuracy of the flowmeter. This allows the verification to occur while the meter is in operation, eliminating the need for a temporary shutdown. Accuracy is very important; therefore, plant operators must be sure the onsite verification process is as accurate and reliable as the offsite one.

Metering Kit Solution

Among the various options typically used for verification today, the Sitrans FUP1010 clamp-on check metering kit stands out. Because the meter is based on the ultrasonic flow measurement principle, it has functionalities that set it apart from other flow technologies. It can measure most conductive or nonconductive liquids (clean or moderately aerated) and liquids with suspended solids. This allows the kit to verify or check the performance of existing meters that measure raw sewage, effluent or freshwater at any given water and wastewater plant. Other application areas include temporary leak detection in large intake or



LEFT: The onsite verification process can be performed on several types of flowmeters and installations within the water and wastewater industry.

RIGHT: The Sitrans FUP1010 check metering kit is delivered with all the tools necessary to perform flowmeter verification.

However, rugged conditions, long use and other factors often make it necessary to verify the meter is still running at 100%. This can be very time-consuming and difficult because the equipment often has to be removed from its location and sent to a factory for testing. This operation requires a plant shutdown in order to remove the device, resulting in lost production time and money.

distribution pipes in the irrigation industry. The accuracy is typically around 0.5 to 1%. A repeatability of better than 0.015% makes it ideal for verifying high-precision measurement tasks such as the addition of chlorine to drinking water.