

Application News

Ultrasonic Flow Meter Assists Water Conservation Effort

Industry: Industrial

Service: Non-intrusive Flow Measurement

Fluid: Water

Overview

Increasingly, both consumers and industry are seeking new, affordable sources for purified water. This includes Reverse Osmosis (RO) water. RO is very effective in reducing a range of water contaminants. This is possible because the reverse osmosis membrane is comprised of microscopic pores which allow the pressurized water molecules, among the smallest molecules known to man, to pass through contaminants, and even dissolved ions are left behind.

Situation

A large mental health facility wanted to monitor the flow of RO water into their facility in order to track usage and initiate conservation programs. RO water was supplied to the facility through a system of PVC pipes.

Solution

Based on the customer's requirements, Flow Technology recommended its SLF-200 Ultrasonic Liquid Flow Meter. The SLF-200 is an accurate, reliable and cost-effective clamp-on ultrasonic instrument capable of measuring flow through metal, plastic and various other materials without altering the piping. In this application, the meter's clamp-on design minimized installation costs and headaches for the user as the device simply attached to the outside of their PVC pipe. The meter also required no special considerations to prevent contamination of the RO water.

Typical applications for the SLF-200 include corrosive chemicals in the process industry, DI water and chemicals in the semiconductor market, fluids in the sanitary industry, or any installation when it is preferable not to have an instrument exposed to the process fluid.

System Description

The Model SLF-200 Ultrasonic Liquid Flow Meter is recognized for exceptional reliability and a low cost of ownership. This clamp-on meter has no moving parts and no pressure drop, and is easily installed without cutting pipes or intrusion into the flow stream. Users can achieve wide rangeability with a single unit.

The Model SLF-200 utilizes digital signal processing (DSP) techniques to deliver outstanding accuracy and repeatability. It can be used on line sizes ranging from 1"-6" (300mm). Installation and setup of the meter is fast and easy. Integral to the display unit, the set-up software leads the installer through a series of questions related to pipe material and size, display configuration and desired outputs. This makes the initial installation or reconfiguration for different applications a straightforward process. The sensors are provided with a robust mounting fixture that allows adjustment of the sensor mounting position for optimum performance. Sensor separation distance is determined and displayed on the SLF-200 during the initial system setup.

Technical Information

Flow Meter: Model SLF-200
Flow Rate: 3.3 to 33 ft/sec
Fluid: Water



8930 S. Beck Ave., Suite 107 • Tempe, AZ, 85284 USA
Tel: 480.240.3400 • Fax: 480.240.3401 • Toll-free: 800.528.4225
E-mail: fmarket@ftimeters.com • Web: www.ftimeters.com
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