

Application News

Ultrasonic Flow Meter Aids Environmental Clean-up

Industry: Industrial

Service: Non-intrusive Flow Measurement

Fluid: Water

Overview

In 2010, Vancouver, British Columbia, Canada will host the Winter Olympics. This global event will attract thousands of athletes and visitors from around the world — requiring the improvement of existing infrastructure in the City of Vancouver, as well as the construction of new facilities to house a variety of sporting activities.

One of the main features of the original Vancouver Olympic bid was the promise to create an Olympic Village that would serve as “a model of environmental, social and economic sustainability.” This included the requirement that all buildings be built according to gold or silver LEED (Leader in Energy and Environmental Design) standards of environmentally friendly construction.

Situation

The City of Vancouver contracted with an environmental engineering firm to clean up ground water at the Olympic Village site. Project engineers needed a flow meter to measure contaminated water pumped through a 3-inch vertical line. They preferred a non-intrusive meter due to the fact that the water contained high levels of caustic chemicals and other corrosive agents.

One of the main issues for this project was equipment delivery — the environmental engineering firm had to receive the flow meter within two days in order to stay on schedule.

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 pipe materials without altering the piping.

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" (150mm). 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: 250 GPM
Fluid: Water



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