

Application News

Ultrasonic Flow Meter Aids Troubleshooting During Product R&D

Industry: Industrial

Service: Non-intrusive Flow Measurement

Fluid: Water

Overview

With new, rigorous engine performance and environmental standards, engine cooling systems are a critical component for agricultural equipment, construction equipment, military, on-highway trucks and diesel engines as well as automotive and light truck applications. These systems can include cooling modules, radiators, charge air coolers, oil coolers, fuel coolers, and condensers.

Situation

A manufacturer of engine cooling systems for off-highway and on-highway vehicles utilized a cooling tower in its product R&D operation. This application required a flow measurement solution to monitor the main water line into and out of the tower for troubleshooting purposes. The manufacturer also wanted the ability to troubleshoot nearby pipes on the cooling tower.

Solution

Based on the customer's requirements, Flow Technology recommended its SLF-500 Ultrasonic Liquid Flow Meter. The SLF-500 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 the case of the engine cooling system manufacturer, the meter's clamp-on design allows it to remain on the main pipe the majority of the time. However, thanks to the unit's five-meter cable length, it can be moved to nearby pipes when troubleshooting is required. Typical applications for the SLF-500 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-500 Ultrasonic Liquid Flow Meter is an accurate, reliable and cost-effective clamp-on ultrasonic instrument capable of measuring bidirectional flow through metal, plastic and even lined pipes without altering the piping. Employing digital signal processing (DSP) techniques, the meter provides outstanding accuracy and repeatability. The same unit can be used on line sizes from 1 to 12 inches without recalibration, and will cover a wide range of flow rates.

Installation and setup of the SFL-500 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-500 during the initial system setup.

Technical Information

Flow Meter: Model SLF-500
Flow Rate: Information Needed
Fluid: Water



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