

Application News

Magnetic Flow Meter Measures Water For Continuous Mix Concrete Plants

Industry: Industrial

Service: Flow Rate/Total

Fluid: Unfiltered River Water

Overview

Massive construction projects require a continuous source of concrete to be poured as rapidly as possible. However, trucking in premix is not an option for such large projects. Concrete must be continuously mixed on-site and delivered via conveyor rapidly to the pour site. Accurate and reliable measurement of water is a must for these continuous mix concrete plants.

Situation

A major worldwide supplier of large-scale concrete placing equipment needed a flow meter to measure and regulate water flow into their continuous mix concrete plants. This company was responsible for concrete mixing and placement on major dam and bridge projects, including the huge Three Gorges Dam in China. River water was the most common source of water, so a flow meter unaffected by occasional influx of silt or sand that was a necessity.

Solution

Flow Technology reviewed the customer's specifications for a flow measurement instrument to accurately measure the flow of river or pond water, and recommended its EL2200 Electromagnetic Flow Meter. River water is an ideal medium for the EL Series mag meter, since it is designed to withstand the affects of sand, silt and other fine contaminants. The EL2200 Series was paired with an MC106A Electromagnetic Flowmeter Transmitter providing a flow rate signal to the control center.

System Description

For the continuous mix concrete plant application, Flow Technology supplied a 1-1/2" EL2200 Series magnetic flow meter and the MC106A transmitter. This size meter can handle up to 170 Gallons Per Minute (GPM) of water. Fitted with 300# flanges, it can withstand the maximum system pressure without problem. The meter's Teflon liner and Hastelloy electrodes are resistant to any possible contamination. The MC106A transmitter was mounted integrally with the flow meter.

Technical Information

Flow Meters (Model Number): EL2200-040A30FP5CA
Electronics (Model Number): MC106ACVNDC21N
Flow Rate: 10 – 170 GPM
Fluid: Unfiltered River Water



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