



Water treatment plant monitors chemical day tanks with Siemens flowmeters

Municipal water treatment plants must monitor their chemical usage according to their state's Department of Health and Environment's (DHE) requirements. Chemical day tanks are used to typically store up to a 30 hour supply of the required treatment chemicals. In addition to weigh scales, the tanks are usually required to have a level measurement device installed to monitor the chemical usage.

Challenge

Chemical day tanks typically require the water plant personnel to check and record the chemicals and amounts used on a daily basis. This type of day tank measurement process is time consuming, can lead to a number of different inaccuracies, and does not provide a real-time measurement.

A new water treatment plant in the Midwest United States was looking for a more accurate and easy way to monitor the chemical feeds from the day tanks. The local Siemens representative, working with Siemens product specialists and the national engineering company contracted for the plant design, helped the customer find the best solution.

Solution

Together with input from the local representative and Siemens specialists, the engineering company designed a system that uses Siemens Coriolis flowmeters to measure and record the chemical usage from the day tanks. The engineering contractor added virtual day tanks to the plant's SCADA system using input from the Coriolis flowmeters to simulate and record the actual amount of chemical usage in the day tanks, all in real time.

This was a new process and several design and installation anomalies were discovered and corrected during the commissioning of the project. Once the project was complete, the state's DHE verified and accepted the measurements from the Siemens Coriolis flowmeters. The water plant now has a reliable and convenient solution for the daily chemical usage that saves money and time in manpower and avoids inaccurate measurements.

Benefits

- Cost savings in time, maintenance and manpower
- Unsurpassed performance and accuracy – 0.1% of mass flow rate ensures maximum quality and reduced waste
- Measurements in real time make it easy to monitor chemical usage
- Corrosion-resistant Hastelloy C22 enclosures protect the instrument from the elements
- Plug-and-play in less than 10 minutes makes start-up quick and simple

Process Instrumentation & Analytics

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About Siemens Coriolis Flowmeters

Every SITRANS F C Coriolis flowmeter provides precise information about liquids or gases flowing through a pipe. Typically, Siemens Coriolis flow measurement capabilities are used for measuring, mixing products, accounting, as well as many other applications. With an emphasis on safety, reliability, and quality, Siemens innovative technologies regularly set new standards in Coriolis flow measurement.

The SITRANS F C MASS 2100 series flow sensors have demonstrated superior performance in numerous applications and field trials relating to mass flow, density accuracy, and turndown ratio.

Typical applications include precise measurements involved in chemical dosing, liquids, gases, pastes, and slurries.

Innovative flow measurement building on strong tradition

The SITRANS F family of flow measurement products has a well-established reputation for reliability in day-to-day applications. These trusted flowmeter products range from simple flow indicators to highly developed bus-compatible electronic flow measurement units. SITRANS F offers the right flowmeter for every application, medium, and industry and is a perfect solution for measuring liquids, gas, and steam.



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