



Cross Helps Hampton Roads Sanitation District Measure Flow Ultrasonically in Concrete Pipe Application

Hampton Roads Sanitation District (HRSD) is responsible for wastewater treatment in Southeast Virginia. They have nine large treatment plants and eight small plants in Southeastern Virginia and the Eastern Shore. They also have over 100 pump stations, and many remote monitoring sites throughout the service area. The collection system consists of a variety of sizes and pipe materials to include concrete, reinforced concrete, ductile iron, HDPE, and PVC. Most force main pipe sizes range from 30" - 60".

When Brandon Hafer from Cross stopped by HRSD to demo portable flow meters, Lee Inman, E&I Superintendent was very interested in the ultrasonic meters from Flexim. They were currently using insertion flow meters on their concrete pipes because they had not found an ultrasonic solution that would work. They were experiencing some issues with the insertion meters. Because they were exposed to the flow of material in the pipe, they required significant maintenance. The cost of both the new meters and replacement parts was very high. According to Lee, "the old meters used older technology and we didn't really know how accurate it was. They were hard to work with, hard to install, and hard to maintain."

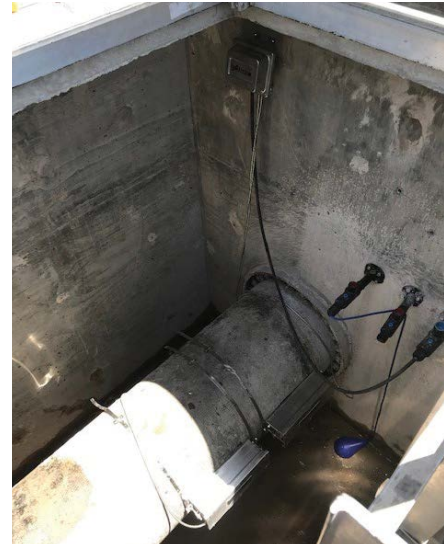


HRSD was already using ultrasonic flow meters in other applications and were comfortable with the technology. As an added benefit, the Flexim meters were about half the cost of the insertion meters currently being used. When Lee heard that Flexim could measure flow ultrasonically on concrete pipes he asked Brandon to bring out a unit and test it on a pipe at a station near his office. Due to a miscommunication about the size of the pipe Brandon didn't have the correct size straps for the pipe they were testing the meter on. Despite that issue, he was able to hold the flow meter sensors on the pipe and still get accurate readings. The team at HRSD was impressed and asked if there was a demo unit available so they could test it at other locations.

After a month testing out the demo unit, HRSD was satisfied that the Flexim was a reliable alternative solution for reinforced concrete pipe flow applications. Lee started the process to begin replacing the old insertion flow meters with the new Flexim units.

HRSD E&I staff installed the first few Flexims with the assistance of Cross technicians. On several contracted pumping station upgrades Cross technicians installed the new meters, as the pipe prep is critical in making sure the meter works properly. Because concrete is porous it can cause issues with the signal getting through the pipe. The air gaps scatter the signal, so the meter is installed with a coupling pad and acoustic grease to ensure that the meter is able to send a strong signal into the pipe. The coupling pad, a rubber-like piece that creates a barrier between the meter and the pipe, ensures that the meter will provide reliable readings without the need to regularly re-grease the pipe. In one of the more difficult applications, the concrete pipe had been underground for 30 plus years. In order to install the meter, the pipe had to be sanded down and a concrete pipe dampening coating applied.

HRSD has already replaced around 20 of these devices and have 40- 50 of the old insertion meters in the field that still need to be replaced. HRSD is so far pleased with the Flexim meters. When asked about his experience, Lee said "the new meters give us better measurement data. The install process is more straightforward, and they are easier to work on. The Flexim meters work well and honestly, they've worked everywhere that we've put them."



About Cross Company

Cross Company is a 100% employee-owned solutions company that is innovating the industrial world one customer at a time. Cross specializes in robotics and machine automation, industrial measurement and calibration, process solutions, industrial and hydraulic hoses & fittings, and is an original equipment supplier in the mobile vehicle systems integration industry. To learn more about Cross visit www.crossco.com.

About Hampton Road Sanitation District

Created in 1940, HRSD is a Political subdivision of the Commonwealth of Virginia. Their mission is to protect public health and the waters of Hampton Roads by treating wastewater effectively. HRSD provides service to 20 cities and counties of southeast Virginia and the Eastern Shore, an area of nearly 5,000 square miles with a population of more than 1.7 million. They operate nine major treatment plants and eight smaller plants with a combined treatment capacity of 249 million gallons per day. To learn more visit www.hrsd.com.