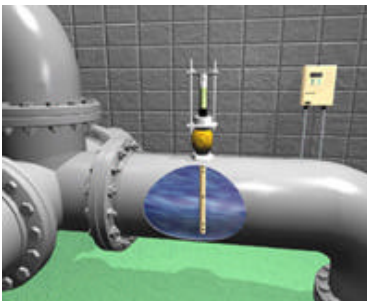
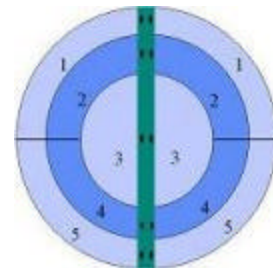


Out With The Old, In With The New At West Kern Water District

The West Kern Water District (WKWD) located in Taft, CA has the responsibility for providing drinking water for the surrounding communities as well as providing large amounts of water for numerous electric cogeneration plants in the area. In 1996, a telemetry system was installed in the district's water distribution plant and a search for replacement flowmeters began. Much of the district's original drinking water infrastructure was antiquated and in need of repair or replacement. Old Venturi and impeller meters originally installed to monitor water flow were also being replaced due to escalating maintenance costs and accuracy concerns. Floyd Jordan, Production Superintendent for WKWD states, "We were looking at measuring our water flows and losses and since the SCADA system was installed we knew we could do this much better with the right flowmeters. Every couple of years we would have to take the impeller meters out and have them serviced. The cost was almost half the price of a new flowmeter." Northern Digital, the contractor/consulting firm that engineered and installed the SCADA system, highly recommended the Marsh-McBirney (MMI) Multi-Mag Magmeters to district personnel. Engineering personnel at Northern Digital had prior experience with the Multi-Mag and urged the WKWD personnel to take a look at the meters. District personnel had also read about the Multi-Mag in a water industry trade journal and was intrigued by its unique features.

The **Multi-Mag** Insertion Magmeter utilizes proven electromagnetic velocity measurement technology. The sensor (illustrated at right) has multiple electrodes that are precisely positioned according to pipe size. The electrodes constantly profile the flow to provide exceptionally high accuracy - even near bends and elbows. Independent laboratory test data from the National Institute of Standards and Technology (NIST) and the Water Research Center (WRc), as well as hundreds of installation worldwide, confirm the accuracy of the Multi-Mag. Accordingly the Multi-Mag has become one of the most popular and effective products ever produced by Marsh-McBirney. Its ability to accurately measure flow in "less than ideal" conditions has earned the Multi-Mag a great deal of respect in the water industry.



The sensor is easily installed through a "hot tap" without the need to shut down the flow, which was one of the district's prerequisites for meter selection. Jordan states, "Taking lines out of service is huge for us. ...we just can't have our main lines down for a long period of time. With most flowmeters you would have to shut the line down and cut in a section of pipe. The line would have to remain down for several hours and we would lose lots of production. Since that approach does not work for us we felt the Multi-Mag looked like a good fix."

Since 1996, the district has purchased twenty-two (22) Multi-Mag's through MMI's local representative, Hykin Systems Automation. Meters range in size from 10 to 36 inches. Jordan comments, "We are very happy with these meters. We just hot tap the line and easily install them." The district's water distribution lines range in pressure from 50 psi in the well fields all the way up to 450 psi at the pump stations. Jordan adds, "When meters were installed on high pressure lines it was only necessary to idle the engines back and the plant did not have to go all the way down. The system was back up and running in minutes."

"The meters are extremely accurate. We have compared the Multi-Mag's accuracy to the impeller meters and they are so much more accurate it's not even funny."

Jordan further states, "The meters are extremely accurate. We have compared the Multi-Mag's accuracy to the impeller meters and they are so much more accurate it's not even funny."

Restrictive piping configurations and short pipe runs were also a concern for the district when researching replacement flowmeters. Jordan comments, "We don't have a lot of pipe diameters that we can mess around with and the Multi-Mag is really good on that since it requires a lot less straight run than other meters."

The district has also seen a significant reduction in maintenance costs they were accustomed to encountering with the old impeller and Venturi meters.

For Jordan, Multi-Mag's accuracy, installation convenience, and time savings will keep him coming back for more!



One of West Kern's Multi-Mag Sensors (left) and two of their transmitters (right).

For additional information contact Marsh-McCrometer, Inc.
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