

Central Valley Facility Reduces Material Cost and Calibration Time with Mobrey MSM400

RESULTS

- Improved measurement accuracy
- Reduced labor costs for calibrating and monitoring the processes
- Reduction in material cost



APPLICATION

Monitoring and control of sludge solids content in municipal wastewater plant

CUSTOMER

Central Valley Water Reclamation Facility (CVWRF), USA

CHALLENGE

CVWRF monitors the sludge density level sent to their digester to save energy and control operation costs. They use heat and polymer to operate the digester. The more solids and less water they send to the digester, the less they have to heat the digester and the less polymer they have to use.

To achieve this CVWRF was using a sludge density meter to monitor solids density in the sludge going from the clarifier to the digester. The meter was used to control the sludge pumps to keep the solids mix at approximately 6%. The meters were difficult to calibrate, had to be calibrated weekly and did not provide a reliable enough reading to allow the sludge pumps to keep the proper mix.

The weekly labor involved in calibrating the meters combined with their inaccuracy, made it difficult to keep the sludge mix at the desired 6%. This resulted in lost revenue in heating the digester, using additional polymer and increased labor costs for calibrating and monitoring the meters, sludge pumps and processes.

“The Mobrey MSM400 is working so well, calibration time is significantly reduced and less heat and polymer is required in the digester system.”

Dean Thornwall, CVWRF



Mobrey MSM400 controller and sludge sensor installation

SOLUTION

To address these challenges, CVWRF installed Emerson's Mobrey MSM400 suspended solids controller along with Mobrey MSM solids density sensors in the system. The meter was easily calibrated and matched their lab readings within 0.2%.

The installation resulted in significantly reduced calibration time, with the additional benefit that less heat and polymer were needed in the digester system.

The CVWRF was very happy with the results and purchased additional units to place in their system. The new Mobrey MSM400 meters are working so well and reliably that CVWRF is planning to change their calibration frequency from weekly to monthly.

RESOURCES

Mobrey MSM400 Sludge Density Meter

<http://www2.emersonprocess.com/en-US/brands/mobrey/Level-Products/Ultrasonic/MSM400/Pages/index.aspx>

Emerson Process Management Power and Water Solutions

<http://www2.emersonprocess.com/en-US/divisions/power-water/Pages/powerwater.aspx>

Installation of the Mobrey sludge density sensors



Standard Terms and Conditions of Sale can be found at www.delta-mobrey.com/terms-conditions/

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