
Application Note

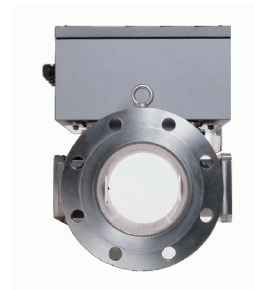
Challenge

Knowing the sludge density or percent solids is critical in many water and waste water treatment processes. Most technologies that are used for this measurement have limiting issues with either, particle size, color, chemicals, flow profile, bubbles, or are intrusive to the process. The need is for an in-line analyzer independent of these problems.

Application

Typical applications include the density measurement of excess sludge, digested sludge, or dehydrated sludge, and during the de-watering process. Improving density control can improve overall control and help reduce sludge processing cost. Better density control means better proportioning of chemicals so that the unit can actually pay for itself in a very short time.

- Controlling the output from the primary clarifier
- Controlling the return rate of activated sludge
- Controlling thickener efficiency
 - Excess sludge
 - Sludge density supplied to thickener
 - Mixed sludge density
- Controlling digester efficiency
- Chemical dosing rate based on sludge density
- Determining total plant mass balances



Solution

We recommend the Toshiba LQ500 microwave sludge density analyzer. It is an in-line instrument similar to a magmeter with the following benefits:

- Measures **Total Sludge Density** including all compounds, minerals, and chemicals
- 2" – 12" line sizes
- Non-mechanical & **Non-Nuclear** Device
- Capable of a resolution within 0.05% of measurement
- **No** sensors protruding into the process piping
- Capable of measuring sludge density from 0 to 65% total solids including suspended and dissolved solids
- The unit is a low maintenance 100% totally electronic device
- Independent of Flow Rate, Pressure, Bubbles, Coatings
- Budget price is \$20-25K



Please contact us for a review of your specific application and a detailed quotation.