



A higher level of performance

Application Reference



Wastewater Plant – Paper Mill

Reliable sonar bed level technology for primary, secondary clarifiers and thickeners.

Application Problem:

The customer at a very large pulp mill wanted to optimize the performance of the process tanks at the wastewater treatment plant. They wanted to automate and alarm when the biological process was not working correctly to guarantee compliance with water discharge regulations.

The Secondary Clarifier

The sonar monitored the RAS (Return Activated Sludge) level and controlled the pump rate to guarantee a good quality biomass density return to the aeration tank. The second output monitored the floc layer which indicated when a biological problem in the secondary was happening. This was also used to control the floc polymer pump to increase settling during this disturbance. A clarity (turbidity) output is also available.

The Primary Clarifier

The sonar monitored the bed level and controlled the underflow sludge pump. The heavy density sludge bed was pumped to the thickener and to the filter press. Controlling the underflow pump by the sonar guaranteed an optimized density being pumped to the thickener which improved settling in the thickener and also to the filter press which reduced maintenance costs by reducing run time.

The Thickener

The sonar monitored the bed level by controlling the underflow bed pump. This guaranteed and optimized density being pumped away to sludge handling filter presses etc.

The sonar also monitored the clarity of the water between the bed level and the launder to control the polymer floc pump. As the clarity deteriorated with greater suspended solids the polymer floc dose increased. As the clarity improved the polymer floc dose decreased which also enhanced the bed density by not overdosing the polymer floc.

Solution:

Hawk installed ORCA sonar transmitter on each tank. Because the application varied in suspended solids and interface densities we provide 3 different sonar transducers to optimize each application.

Ordering information:

 (including auto cleaning system) OSIRSC-A

1. Primary Clarifier: OSIRDYX - OSIRT302S4XC6 - OSIRME-L3 - OSIRSC-A
2. Secondary Clarifier: OSIRDYX - OSIRT002S4XC6 - OSIRME-L3 - OSIRSC-A
3. Thickener: OSIRDYX - OSIRT702S4XC6 - OSIRME - L3- OSIRSC-A

Application guaranteed!



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