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WQM-16S Monitors

MLSS, Dissolved Oxygen, Blanket Detection & Valve Position

The **WQM-16S** was installed in a W.w T Works to monitor the **MLSS**, **DO** in two bubble aeration activated sludge plants and **Blanket Solids** in four final settlement tanks to detect the sludge **Blanket**. Opening and closing of the bell-mouth valve was also monitored using potentiometers to display the position as % of valve opening. A total of 21 parameters were continuously monitored and displayed.



The **MLSS**, **DO**, **Valve Position** and **SS/Blanket** data was continuously displayed on the local dot matrix display **MLSS & DO probes** and simultaneously transmitted through the Low Power Radio Link Modem to the control room via the **RS232C** digital interface. This stores data as well as displays the trends on a monitor providing the user with the necessary information about the plant operation.

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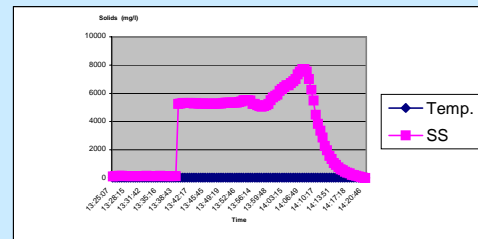
SB-Chek monitors MLSS and Blanket Level simultaneously

Two **SB-Chek** units were installed to monitor the **MLSS** (mg/l) as well as determine the sludge blanket interface in two **SBR** tanks.

During the aeration cycle, the **SB-Chek** will monitor the **MLSS** continuously. Once the settlement cycle is initiated, the **SB-Chek** monitors both the **MLSS** as well as the Sludge Blanket interface. The **SB-Chek** tracks the set Solids interface (e.g. 5000 mg/l). Both the **Solids** (mg/l) and the **Blanket Level** (m) are displayed locally via the Dot Matrix display unit as well as being accessible via the two 0/4-20mA current outputs.

MD-1 Hand-Held Meter ... checks the coagulation

The **MD-1** (SS & Temp) meter is used to check the **SS** (mg/l) and **Temp.** in a Water settlement tank to establish the performance of the coagulation process. The solids range of the **SH2** probe is up to 10,000 mg/l. The data is linearised and displayed in mg/l. The meter readings are comparable to laboratory dry weight solids results.



The **MD-2** meter can store the **SS & Temp.** data, at programmable intervals, and then download it to an IBM-PC using **MD-Soft** software package. The stored data can also be played back and recorded on paper. The graph above represents the data in Excel format. Checking the solids will allow the user to control the polymer dosing effectively (reducing costs) as well as enhancing the water quality in the next stages of the treatment process.

Monitoring MLSS, Dissolved Oxygen and FE Discharge in a small Ww T Works

One of the attractive features of the the **WQM-16S** unit is that it can be used to monitor a number of process parameters within a small T Works. This is an approach to implement a **LOW COST** monitoring system.



The **WQM-16S** has been installed in a small Ww T Works to monitor the **MLSS**, **Temp.**, **Dissolved Oxygen** in activated sludge tank and **SS/Turbidity & Temp.** in the final effluent discharge. The data is displayed continuously through the Dot Matrix LCD, and also transmitted via the

four 4-20mA current outputs to the SCADA system.

The **WQM-16S** unit energises the **WQM-CL** Auto-Cleaning Unit to clean the probes simultaneously every hour for a period of three minutes. The probes remain clean for months until it is time to calibrate the system.

The solids and alarm conditions are also locally displayed while the solids thresholds, current outputs, response time, cleaning cycle, relay delay time and probe calibration can all be programmed via the 4x4 membrane keypad.

A LOW COST Monitoring System for Small Works Application

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