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Automating the Sludge Blanket Interface Measurement Using Drexelbrook’s CCS4000™ Multi-Channel Sludge Blanket and Clarity Monitor

Automated Sludge Blanket Interface Measurement Saves Money:

1) Eliminate the Need for Manual Measurement

- Many plants are now operating with fewer personnel. These valuable employees can now be utilized for more critical tasks.
As one plant manager in the south stated, **“We have had recent personnel cutbacks and I want to eliminate all “sludge judge” measurements....I need to free-up time for my operators”.**
- You can now also eliminate the “subjective” sludge judge interpretation that is quite common from operator to operator.
Another plant superintendent in the south said, **“I had all of my operators make a sludge judge measurement on a clarifier one day and they all came up with different readings. Now I have no faith in this manual measurement”**

2) Measuring Sludge Level Reduces Pumping Costs

- By accurately tracking the compacted sludge, only the dense sludge is withdrawn which reduces dewatering and disposal cost for maximum efficiency.
One East Coast plant manager said, **“I will save a total of \$15,000 per year on pumping costs alone on these 4 vessels”.**
- Eliminates unnecessary pump run time, which reduces “wear and tear”.

3) Measuring “Rag” Layer Optimizes Addition of Settling Agents

- In addition to detecting the compacted sludge interface level, The CCS4000 simultaneously tracks the lighter “rag” layer that typically forms

above the blanket. This valuable data can be used to monitor the settling characteristics of the vessel and the output can be used to control chemical additives.

4) Avoid Excessive Blanket Build-up

- Automatic blanket monitoring/alarm helps prevent “washout” conditions (excessive solids in discharged effluent) which left undetected, can lead to permit violations and costly regulatory agency fines.
One industrial customer states, **“We cannot afford to get in trouble with the local municipal sewer authority again. Prior to your instrument, we were not controlling the solids and the sewers got clogged with clay from our process”.**
- Job security is another benefit of avoiding permit violations/fines.
A plant manager in California says, **“If it gets to the point where the State is going to issue us a fine, I’ll lose my job”.**
- Overly compacted sludge can cause mechanical damage to bottom rakes, which can lead to significant repair costs.
- Preventing weir blockage can avoid costly downtime.

5) Avoid Low Blanket Build-up

- Money is saved by eliminating the removal of sludge that is not properly compacted (too “thin”).
- With proper blanket build-up, hydraulic overloading of the digesters can be avoided. This leads to efficient digester operation.

- Maintaining consistent sludge inventory improves RAS (return activated sludge) operation.

6) Avoid Vessel/Biological Upsets

- The “Clarity Loss” indication/alarm can help prevent a biological upset condition, which can put the vessel out of service for up to several weeks. This benefits the plant by avoiding costly downtime and, in some cases, over burdening operation at maximum capacity. Another east coast plant manager states, **“The ‘Clarity Loss’ alarm has proven to be an effective ‘early warning’ and it has helped us prevent biological upsets thus avoiding significant downtime”.**

7) Defer Capital Expansion

- Through improved efficiency and better control, many plants have increased their throughput, which has delayed the need for capital expansion. A plant manager in the New York area has said, **“I have been able to significantly increase my overall plant efficiency, and as a result, I do not have to go to City Council for capital expansion funding”.**

For more information on the CCS4000™ Multi-Channel Sludge Blanket and Clarity Monitor, call us at the factory, visit our website (www.drexelbrook.com), or contact your local representative.



www.drexelbrook.com

Main Office:

AMETEK Drexelbrook
205 Keith Valley Road, Horsham, PA 19044 U.S.A.
(Tel) 215/674-1234, (Fax) 215/674-2731
(Email) deinfo@drexelbrook.com

Europe Office:

Drexelbrook Instrumenten,
Bedrijvencentrum Rede, Waalresweg 17,
5554 HA Valkenswaard, Netherlands
(Tel)+31 (0)40 208 9298, (Fax)+31 (0)40 204 7933
(Email) DE_Europe@Drexelbrook.com

Japan Office:

Nihon Drexelbrook,
2Chome, 12-7 Minami Gyotoku, Ichikawa City,
Chiba 272-01 Japan
(Tel) 473-56-6513, (Fax) 473-56-6535
(Email) DE_Japan@Drexelbrook.com