

STREAMING CURRENT DETECTOR



MILTON ROY

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Why Streaming Current?

Efficient Coagulant Control. . .

Coagulant dosing would be a simple matter if influent conditions were always the same. But they aren't. Traditional means of determining dosage, such as jar tests, are useful, but are off line and cannot control dosage automatically.

Streaming Current Technology offers you a better choice. The Milton Roy Streaming Current Detector (SCD) is a time proven instrument. Hundreds of water treatment plant operators have been satisfied SCD users for the past decade. Today, leading engineers and consultants are incorporating SCD's into new plants and retrofitting existing plants with them. The Milton Roy Streaming Current Detector can help you to control coagulant dosing and to lower chemical costs, too!

How Streaming Current Works

The Streaming Current Detector is an analyzer which measures the net electrical charge of suspended particles after coagulant dosing. By sampling after dosing, the SCD measures the charge of unreacted particles only. This can be thought of as the "work not done" by the coagulant.

These remaining unreacted particles will eventually be read as effluent quality, which then can be controlled by varying coagulant dosage to maintain a selected SCD value. This value becomes the SCD "set point," which corresponds to both the net charge of the remaining particles and the effluent quality.



The Milton Roy Streaming Current Detector family includes three SCD models, a remote monitor station, and a remote controller station.

Applications

Water Treatment

Close control of coagulants is necessary to meet drinking water standards. The Milton Roy SCD optimizes the dosing of Alum, Ferric Chloride, Polymer, and other coagulants. This assures efficient control of turbidity, consistent production of high quality water, and maximum removal of giardia and cryptosporidium. With the movement toward higher water quality standards, the SCD makes sense as the best available technology.



Municipal water treatment

Wastewater Treatment

The Milton Roy SCD is beneficial in applications such as belt press, centrifuge, and dissolved air flotation. The SCD constantly monitors polymer feed, permitting optimal dewatering while reducing chemical usage.



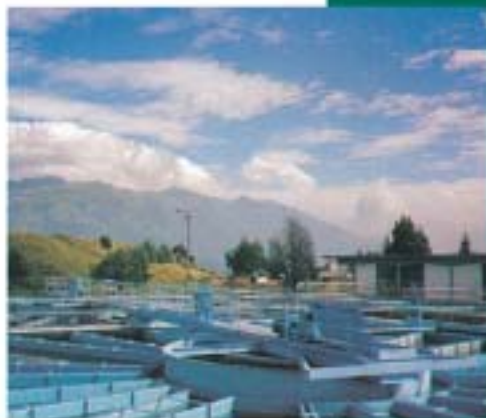
Municipal or industrial wastewater treatment

High Purity Water

Pretreatment systems for high purity water that require the addition of a coagulant benefit greatly from a Milton Roy SCD in the process loop. Overdosing or underdosing of polymers can cause fouling of ion exchange resins or membranes. The SCD maintains optimal dosage, eliminating this potentially expensive upset.

Industrial Processes

Any process where cationic or anionic chemicals are added are potential SCD applications. The Food, Petrochemical, and Paper industries are finding the SCD to be a valuable tool for optimizing the process efficiency and finished product quality.

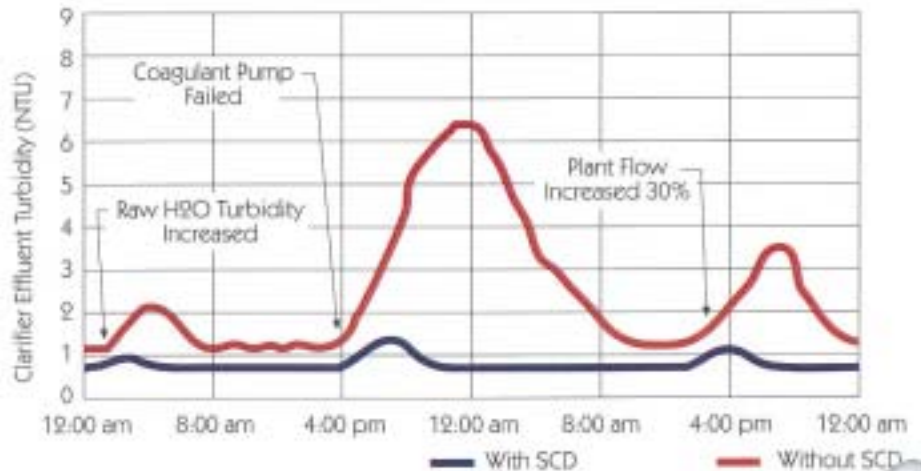


Industrial water treatment



The Milton Roy SCD. . .

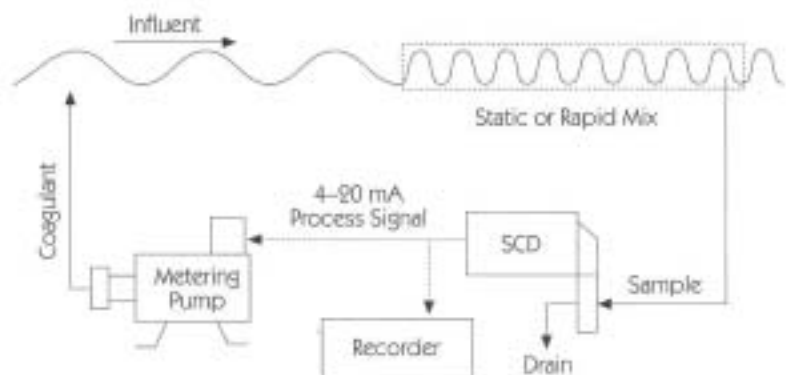
- Ensures consistent effluent quality.
- Lowers operating costs!
- Reduces usage of coagulants and pH control chemicals.
- Permits longer filter runs.
- Alerts operator to system upsets.
- Controls coagulant dosing automatically.
- Responds instantly to changes in flow or influent quality.
- Minimizes chemical residual in finished product.
- Prevents poisoning of resin beds.
- Decreases sludge volume in settling basins.
- Allows continuous cleaning of the SCD probe during operation via an optional Jetwash cleaning system.
- Handles high solids water or wastewater via a patented high flow probe.



Typical SCD System Control Loop

This control system automatically paces chemical dosing to changes in flow rate, suspended solids, and/or chemical concentration.

All of the components of the SCD system, including metering pumps, controllers, and recorders, are available from Milton Roy. Your local representative can help you to select the best combination for your water treatment application.



201 Nyland Road
Nyland, PA 18974
Phone: (215) 441-0800
FAX: (215) 441-8620
Website: www.miltonroy.com
Email: info@miltonroy.com