

SCD-6000 represent new advances in coagulant dose control

SCD-6000 Streaming Current Detector continuously measures ionic and colloidal charge, which indicates coagulant dosage in treated water. The SCD-6000 ensures optimum coagulant dosage. Excellent sensor design, to ensure that the instrument for a long time trouble-free operation, can save 20-30% of the cost of chemicals.



Applications

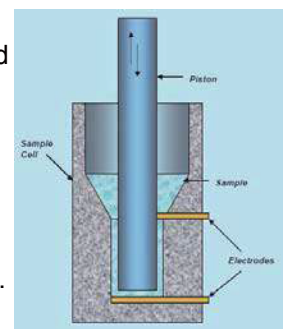
- Potable water treatment
- Polymer control for sludge dewatering
- anionic trash detection in whitewater loops papermaking wet end processes
- Power plants
- Paper mills
- other applications requiring a chemical coagulation process

Benefits

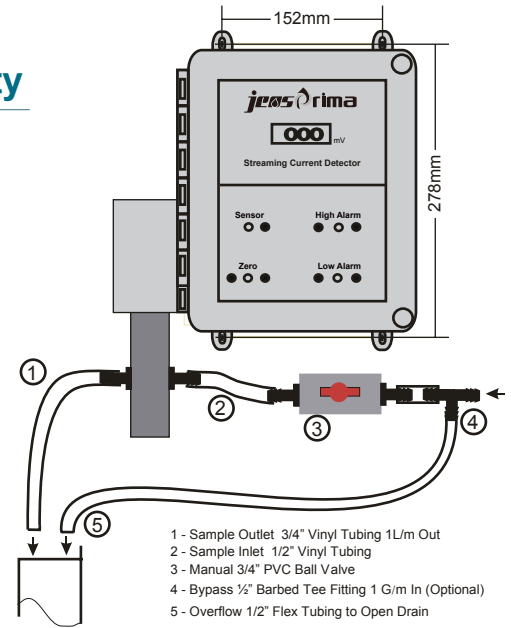
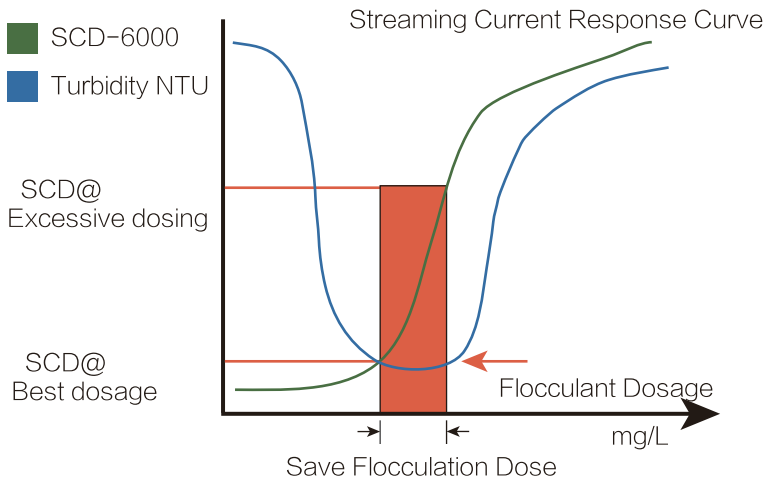
- Chemical Savings (20 - 35%)
- Maintain Water Quality
- Self calibrating and self monitoring
- Feedback Control
- Easily Retrofitted
- Optimize Treatment

Measuring Principle

The streaming current is one of the important electrical phenomena at the solid-liquid interface, which was first discovered in the capillary model test. When the liquid is subjected to a certain pressure through a capillary or microporous plug, charge transfer occurs during the liquid flow, and the current generated during this charge movement is called the streaming current. The potential difference at both pipe end is called the flow potential. The streaming current detection is finished by the SCD-6000 streaming current detector. The water sample flows into the detecting chamber at a certain flow rate (1L / min), in the detecting chamber, there is a Teflon piston, who is making vertical reciprocating movement. The narrow gap between the piston and the detection chamber wall constitutes an annular capillary space. The piston driven by motor is making reciprocating movement, so that the water sample in the capillary makes reciprocating movement accordingly, the particle in water sample will be attached to surface of the piston and the inner wall of detecting chamber, forming a particle "film", the diffusion layer of the microparticle "film", driven by the water flow in the annular capillary to do the counter ion movement, thus causing the flowing current. The streaming current is collected by the electrodes at both ends of the detection chamber and is displayed on the meter in the form of mV after signal processing. The streaming current value is proportional to the charged state of the water sample. The charged state depends on the amount of excess positive and negative ions in the water after flocculation, so it can be used to detect or control the flocculation process.



Control Effects Figure Between SCD & Turbidity



Technical Data

Model	SCD-6000
Measuring Range	-1000 - 1000 mV
Accuracy	0.1%
Resolution	1 mV
Display	LED
Flow speed	1 L/min (Standard)
Response time	1 s
Self-diagnosis	Sensor LED
Repeatability	±0.1%
Fluid velocity	0.1 - 10 m/s
Analog output	4 - 20mA, Max. load 750Ω
Sensitivity gain	It has been set up at factory, not recommend to make adjustment
Supply power	220 VAC, 110VAC (optional)
Output	4 - 20mA, -10 - +10V, 0 - 10V
Communication	Modbus (Optional)
Alarm	High / Low relay
Self-washing / PID	SC-2 Controller (optional)
Zero adjustment	Full range adjustable
Protection Grade	IP65
Install Dimension	11"x6"
Weight	9kg

Applications



Order Guide

Order No.	Descriptions
33-6000-00	SCD-6000 Streaming Current Detector
50-6000-10	Teflon carbon rods