

Coagulant Dosing Analyzers

The Polymer Control System helps to reduce polymer costs, improve cake dryness, and optimize the dewatering process. It measures electrokinetic charge of a continuous sample. This streaming current reading can be used to automatically control feed pump output for optimum polymer dosage.

The ideal situation in any wastewater treatment system is steady state conditions: constant solids, concentration (and type), and constant chemical feed. This is rarely the case. As solids holding vessels are filled and pumped out, flow rates and solids concentrations change. Polymer make-up may not always be the same, nor pump rate consistent. It is impossible for the equipment operator to keep up with these changes and adjust flocculant dosages accordingly. Therefore, the tendency is to overfeed to smooth out the bumps.

This overfeed can amount to a sizeable amount of money annually. Polymer costs in many sludge dewatering operations is a major concern. Although new and improved methods are continually being developed to dewater sludge, most equipment still requires polymer to attain desired throughput and cake dryness. If improvement in cake dryness can be obtained with less polymer, the savings in large plants can be enormous, especially when the cake is being incinerated or hauled to a landfill.



SYSTEM DESCRIPTION

The analyzer continuously measures electrokinetic charge in a filtrate/centrate and indicates on a digital meter the numerical charge value that corresponds to optimum polymer dose. The analyzer is capable of automatically controlling polymer feed to a centrifuge on a continuous basis to maintain a fixed charge value (setpoint).

BENEFITS

Reduce Polymer Costs, Reduce Hauling Costs, Reduce Incineration Costs, Reduce Solids Recycle
Improve Machine Runnability, Reduce Maintenance Cost,

STANDARD FEATURES

Patented Sensor Design, Microprocessor Technology, Quick Replacement Probe & Piston,
Self-Diagnostic Sensor, High-Volume Flow Minimizes Sensor Fouling, SmartTrac PID Control,
Sensor Maintenance Module (S.M.M.), Web Access Controller (W.A.C.)

OPERATION

The System optimizes polymer dosage on biosolids / residuals dewatering machines. The Sensor responds to changes in mass flow, solid levels / characteristics, and automatically maintains the proper polymer feed.

ECM ECO Monitoring

Environmental & Process Monitoring instrumentation & systems

NEW FEATURES: Each unit is now capable of communicating thru Modbus ASCII, Modbus RTU and Modbus TCP (Ethernet). Additional hardware is NOT required.

Precision optics and advanced electronics make these particle counters perform with unparalleled accuracy.

Patented sensor flow cell is externally mounted to eliminate any possibility of water damage to counter electronics. A constant head, flow controller with low flow alarm provides a simple, reliable, sample system.

Counter communicates digitally using anonproprietary serial interface which emulates the Optomux Opto 22 protocol. Ninety six (96) counters can be multi-dropped on a single RS485 serial communications loop up to 4,000 feet.

There is a software for communicating with the particle counters. It includes real-time and historical trending capabilities for particle counts, alarms, and auxiliary inputs such as turbidity, flow rate, headloss, etc.

Server software ([OPC](#), [DDE](#)) is available. It supports particle count data, auxiliary inputs, and alarm conditions for third party SCADA integration. Up to four isolated analog outputs are available per sensor for particle counts.



SPECIFICATIONS

The Laser Particle Counter combines simplicity of operation with powerful performance to set the standard for on-line particle counting. The external sensor contains the laser diode light source, flow cell, and detector circuit. The sample is passed through the flow cell, and pulses corresponding to each particle are output from the detector circuit. The size and quantity of these pulses is then translated into particle size and quantity information. The sensor detector circuit is sealed in a enclosure separate from the main enclosure. This feature allows the sample to be passed through the flow cell without entering the main enclosure and exposing the electronics to potential leakage.

BENEFITS

Optimize Crypto and Giardia removal, Provides Particle Size & Quantity Information, Immediate Response To Process Changes, Maintain High Quality Finished Water, Optimize Filter Backwash, Improve Filter Performance , External Sensor Simplifies Sensor Maintenance, Network or Stand-alone Operation.

STANDARD FEATURES

Patented Sensor Design, 2-900 micron, External Sensor, Volumetric Measurement, Backlit Liquid Crystal Display, Large Flow Cell Minimizes Sensor Fouling, Corrosion Enclosure, 2 Wire RS485 Serial Computer Interface, TracCom Software for Instrument Setup, Eight Channels of Particle Counts, Cell Condition Readout (0 to 100%), Sapphire Optical Windows.