

ON LINE CHARGE TITRATOR MODEL ECT9800



BENEFITS

Optimize the Wet End Process

- Quantify Level of “Anionic Trash”
- Identify Sources of Charge Disturbances
- Control Charge Variability
- Improve First Pass Retention
- Stabilize White Water Consistency
- Ensure Consistent Product Properties
- Optimize Polymer/Coagulant Feeds
- Increase Machine Production

STANDARD FEATURES

- Three (3) Process Points Sampling
- Thickstock Sampling (Up To 5%)
- Measures Charge and Charge Demand
- Optional pH and Conductivity Sensors
- Two Titrant Pumps, Two 8L Titrant Jugs
- Low Maintenance, Improved Reliability
- Web Access Controller w/ Web Pad
- Ethernet Connectivity
- Analog/Digital I/O's

APPLICATIONS

- › Tissue
- › Coated Papers
- › Fine Paper
- › Linerboard
- › Speciality Papers
- › Newsprint

MEASUREMENT PRINCIPLE

The instrument incorporates streaming current technology to produce a measurement of electrokinetic charge (ionic & colloidal) using a sample obtained from various points in the process (Headbox, Coated Broke, Machine Chest, Tray Water, etc..). The sample is then titrated with a low molecular weight polymer of the opposite charge to bring the sample to a neutral charge. The amount of titrant consumed by the sample is used to quantify the level of charge (anionic or cationic) present in the furnish. The result, given as Charge Demand, can be used to effectively control the addition of cationic additives (starch, polymers, coagulants, etc..) in order to stabilize charge disturbances. Reducing or even eliminating charge variability stabilizes the wet end and helps optimize and reduce feed rates of expensive additives while also improving paper qualities.

Pulp and Paper / Wet End Analyzer

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GENERAL SPECIFICATIONS

Standard Features

- ECT 9800 measures 3 sample lines (e.g. Tray Water, Headbox, Thickstock up to 4%)
- Two (2) titrant pumps (Cationic/Anionic)
- Chemical Wash Equipped
- Web Access Controller
- Highly reliable thickstock sampling
- Operation and Service Manual
- Spare parts kit
 - 1 filter
 - 1 probes
 - 1 pistons
 - 1 viton seal
 - 1 O-Ring kit
 - 1 Cleaning brush
 - 1 Graduated cylinder
 - 1 Piston tool
 - 1 Pilot valve

Optional Equipment

- pH Analyzer
- Conductivity Analyzer

Power Requirements

- 115VAC, 60Hz
- Optional 230VAC, 50Hz
- Uniform power source recommended

Environmental Temperature

- 40 to 150°F (4 to 65°C)

Sample

- 0% to 4% consistency
- 10 to 50 gallons/min (40 to 190 L/min)
- pH range: 3 to 9
- Conductivity range: 0.1 to 3 mS/cm
- Temperature range: 40 to 150°F (4 to 65°C)
- Deliver to ECT and return to the process

Sample Connections

- 2"MNPT sample inlet for each sample line
- 2"MNPT sample outlet for each sample line
- Optional 2" ball valve on sample inlet/outlet

Instrument Water

- Filtered or potable
- Pressure: 30-150 p.s.i.
- Connection: ½" FNPT
- Consumption: appr. 5 gallons (19L) per hour
- Temperature: 60 to 150°F (15 to 65°C)

Instrument Air

- Pressure: 60-150 psi
- Connection: ½" FNPT

Dimensions

- 26"W x 30"D x 70"H (61cm x 61cm x 178cm)

Weight

- 200 lbs. (91kg)

Enclosure

- Two NEMA 4X, 304 Stainless Steel

Materials in Contact with Sample

- Delrin
- Teflon
- Neoprene
- Viton
- PVC
- 316 Stainless Steel

Measured Parameters

- Streaming Current (Charge), Charge Demand
- Optional: pH, conductivity

Information Derived

- Charge or Streaming Current (SCV)
- Charge Demand (ml or milliequivalents)
- Optional: pH, conductivity

Output Signals

- Web Browser Enabled (802.11b or direct Ethernet connection)
- 4-20mA (650? Load), two outputs per sample line (for SCV and Charge Demand)
- With pH analyzer, one additional output per sample line
- With conductivity analyzer, one additional output per sample line
- Six (6) Digital Outputs (+24 VDC)

Input Signals

- Ten (10) Analog Inputs (Isolated)
- Fourteen (10) Digital Inputs (Isolated)

Maintenance

- Once every 2 to 4 weeks, clean sensor and refill titrants (15 minutes).
- Once every 2 to 6 months, clean valves and filters (30 minutes)

Titrants (Polyelectrolytes)

- PolyDadmac (cationic) and PVSX (anionic)

Chemical Wash

- Automatic Cleaning of Sensor
- Consumption: <20mL/hour

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