

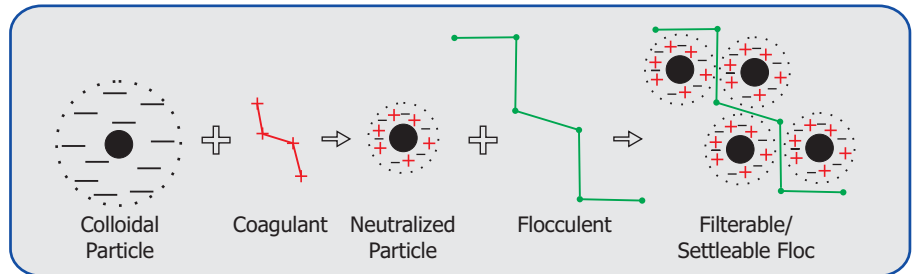
Industrial Water Division

Advanced Technologies for Treatment of Wastewater and Process Liquids

PCM™

Chemical coagulants (sometimes known as filter aids) cause impurities such as submicron/colloidal particles, bacteria, organics and color (tannin) to be absorbed onto media surfaces. The coagulants neutralize charges on material in water. They are sometimes used with flocculents as shown in the following figure to agglomerate materials into a large mass (floc).

The key to effective impurity removal is injection of the correct type and concentration of chemical filter aids. If too little is injected, the material is not removed. If too much is injected, then all the material in the water takes on a like charge and the impurities repel one another. This occurrence can lead to particulate throw and fouling of downstream components.



Avantech has standard Particle Control Management (PCM) Systems for the following applications:

Wastewater Treatment -

- Colloid / Submicron Particle Removal
- Radionuclide / Activation Product Removal
- Coagulation / Flocculation of Industrial Effluents
- Sludge Dewatering

Process Applications -

- Paper Production
- Metallic & Non-metallic Mineral Ores
- Colloidal Solutions
- Industrial Makeup Water Treatment

The PCM incorporates new technologies for monitoring and controlling the amount of coagulants, flocculent, acids and/or bases required to maintain optimum particle removal while minimizing backwashing and waste generation.

The PCM eliminates the need for Jar Testing and other time consuming and cumbersome methods of optimizing the chemical injection parameters. It also maintains water treatment parameters at their optimum values regardless of flow, solids concentration, conductivity, etc.

The PCM will:

- Read & Report Process Stream Charge Values and Particle Counts
- Adjust chemical injection rates based on changes in flow, solids concentration and chemical concentrations
- Minimize chemical dosage
- Allow operators to consistently produce product within established plant / regulatory criteria



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Features

- - Computerized Operator Interface
 - Allows Continuous Monitoring
 - Simplifies Operation & Training
 - Documents Alarms & Operational Parameters
- - Compatible w/ Polymers, Salts, Acids & Bases
- - Auto Batching of Full Strength Liquids & Dry Powders
- - Skid Mounting

Benefits

- - High Particulate & Colloidal Removal Efficiency
- - Reduced Operator Attention
- - Extended Filter Runs
- - Increased Organic Matter Removal
- - Reduced fouling of downstream components due to solids or chemical overdosing
- - Constant compliance with regulatory discharge and product water criteria
- - Reduced chemical usage by 25%+



We're Available for You:

For additional information on this and other Avantech services, please contact us at the office nearest you, or visit us on the web at [www. avantechinc.com](http://www.avantechinc.com)

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