

RECORDED BENEFITS

- Operating cost reductions of \$240,000 to \$1.2MM
- Up to 60% lower sludge handling
- More stable clarifier operations during upsets, better mill water quality
- Improved asset protection

A Simple Chemistry Change Improves Mill Water Quality, Lowers Operating Costs

Chargepac™ Coagulant

Customer Challenge

Every mill manager seeks to reduce their operational cost per ton of product produced. Additionally, mill managers are constantly challenged to save time for their staff, reduce variables which harm paper quality, and better protect their assets from the effects of corrosion.

Recommended Solution

Solenis has identified that replacing commodity alum used for mill influent water treatment can save up to \$1.51 per ton based on a study at three mill sites in the U.S. Alum is often used to remove solids from the influent mill water system. Replacing it with a Chargepac specially-formulated coagulant is easily accomplished with little to no involvement of mill staff. In fact, an easier to manage feed system is often employed.

Results Achieved

A number of operations in the US, including pulp, tissue and packaging facilities have reported major cost savings in a variety of unit operations due to making this change. Additionally, each mill is now greener and safer, with more than three fewer chemical deliveries per month and over 1.5MM fewer lb of chemicals shipped per year. Lower corrosion rates are seen in mill water system which extends asset lifespan and reduces maintenance capital replacement costs. Additionally, with less corrosion there is less iron in the water. Combined with better manganese removal and less aluminum in the influent, mills realize improved brightness and less scaling of heat exchangers.

Cost Improvement Area	Mill #1	Mill #2	Mill #3
Alum, Caustic, Polymer Savings	\$150,000	\$340,000	\$513,000
Demin Regenerant Savings	\$45,000		\$301,000
Resin Replacement			\$33,000
Mag Sulfate for Bleaching	\$45,000		
Rental Demin Trailer			\$338,000
Dredging Costs			\$38,000
Corrosion Inhibitors		\$250,000	
Chemical Freight Costs		\$63,000	
Total Annual Mill Cost Reduction	\$240,000	\$590,000	\$1,223,000

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