GE
Water & Process Technologies

Case Study

# Removing Particulates From Precipitator Saves Wood Products Plant US$517,092

## Challenge

Wood fiber was not being effectively removed from a gas stream that entered the wet electrostatic precipitator at the Langboard, Inc. - MDF wood products plant in Georgia, manufacturing medium density fiberboard. As a result, the water used in the pre-quench and quench duct sections of the precipitator was becoming saturated with particulates that coated the internal plates. A shutdown was required every few months for manual cleaning of the plates to restore the system's efficiency.

## Solution

GE Water & Process Technologies recommended using PolyFloc* CE1159 to gather the fibers together in the settling tank of the precipitator. When the bound fibers floated to the surface, they were removed using a rake system constructed by the plant and then burned for boiler fuel.

## Results

Production losses from shutdowns were eliminated. Because the quench duct system was working more efficiently, formaldehyde emissions dropped from 15 ppm (mg/L) to 7 ppm (mg/L), complete system dumps of approximately 15,000 gallons (57 $m^3$) that had occurred weekly were no longer required, greatly reducing biochemical oxygen demand (BOD) and total suspended solids (TSS) loading in the waste discharged to the municipality and lowering sewage surcharges. These improvements conserved 780,000 gallons (2,953 $m^3$) of water and eliminated 455,400 pounds (206,566 kg) of solid waste and 40.8 tons (37 metric tons) of air emissions per year. The net annual savings totaled US$517,092.

Find a contact near you by visiting gewater.com or e-mailing custhelp@ge.com.

**Global Headquarters**
Trevose, PA
+1-215-355-3300

**Americas**
Watertown, MA
+1-617-926-2500

**Europe/Middle East/Africa**
Heverlee, Belgium
+32-16-40-20-00

**Asia/Pacific**
Shanghai, China
+86 (0) 411-8366-6489



CH533EN 0512