

Augusta Newsprint, Augusta GA

# Plant Performance Services adds smarts to one pulp-mill pump and saves \$720,000

## Situation

### The Search for Energy Savings Leads to Power-Hungry Pumps

Augusta Newsprint was founded in 1965 as Cox Newsprint. At the time, the mill included one paper machine and a ground wood pulp mill. Now, the mill operates two paper machines, a woodyard, a thermo-mechanical pulp (TMP) mill, a recycled newsprint mill, a bark boiler, utilities, and support areas. Today, more than 300 mill employees help to produce 1,200 tons of newsprint per day.

Although the mill ranked high in overall energy efficiency, it wanted to make improvements and become an industry leader. The mill's engineering consultant commissioned an Energy Performance Service study from ITT's Plant Performance Services team. Noting that centrifugal pumps consume 21 percent of the mill's total energy, the EPS report surveyed pumps across the operation to identify savings opportunities. One that the report flagged in particular was a 200-hp pump that drives paper stock up into a tower as part of the newsprint production process.

## Solution

### Plant Performance Services Pumps Up System Efficiency

Though the TMP pump was not an ITT Goulds Pumps product, the PPS team converted the fixed-speed pump to a variable speed solution using the ITT PumpSmart controller. Instead of controlling flow of paper stock with a mechanical valve, the new intelligent system manages flow by adjusting the speed of the pump. This allows the mill to remove a cavitating control valve that required frequent replacement; to reduce power consumption because the pump is no longer running continuously at full speed; and to increase the mean time between failures because the pump is more consistent.



*By adding an ITT PumpSmart controller to a third-party pump, the Plant Performance Services team helped achieve dramatic cost savings in the mill's tower-pumping operation.*

## Results

This improvement helped make Augusta Newsprint an industry showcase for the Department of Energy's Office of Industrial Technology. Specific benefits to the mill included:

- Motor speed was reduced from 1,150 RPM to 450 RPM, saving more than \$30,000 annually in utility costs.
- MTBF increased from 1.5 to 4.0 years.
- A \$720,000 operating cost reduction for a single pump over its 20-year life—through reduced maintenance, downtime, and other life-cycle costs.