



A Division of B&D Industrial

**PULP & PAPER INDUSTRY**

# DIGESTER GEARBOX CHALLENGE

## CUSTOMER PROFILE:

An Alabama paper mill

## THE PROBLEM

While hosting a luncheon with a prospective pulp and paper customer, the B&D Service team received a unique test of skill. The mill's contractor coordinator was impressed by our experience in the industry and gave us a challenge in the form of a gearbox operational problem that one of our competitors had been unable to solve. The general contractor had improperly installed the digester gearbox. As a result, contact patterns were less than 30% on many of the gears.

Though boasting 1.3 million in-lbs. of torque, it was regularly failing in intervals of six to 18 months, an unusually short shelf life for an operational gearbox. "If you can fix that," the customer told us, "we'll be impressed."

## THE SOLUTION

After changing out the digester gearbox onsite with a rebuilt spare in only 14 hours, B&D Service's engineers and technicians at the Macon branch took over, using reverse engineering to find an innovative solution. After an exhaustive discovery process, the team pinpointed the problem.

A competitor had defectively machined the bores in the gearbox, making them severely out of tolerance. We proposed new gears from UniGear, which are superior in quality and strength. We corrected the bores and completely rebuilt the gearbox, all for a competitive price. When we sent the documentation breaking down the problem and solution, the customer was indeed impressed.

Our team installed the rebuilt gearbox during a scheduled summer outage. We put in countless hours installing a new base to properly anchor the huge gearbox. We also worked with the customer's optical alignment crew to ensure we mounted the gearbox within tolerance: it was within 0.003 inches perpendicular and flat. Our team also rebuilt the customer's second digester gearbox with new gears from UniGear. Overall, the vibration levels are down, oil samples look good and the gearbox sounds much better.

478-746-7623  
[corporate@bdindustrial.com](mailto:corporate@bdindustrial.com)  
**BDINDUSTRIAL.COM**