

RECORDED BENEFITS

- Annual savings of \$450,000
- Increased average cake solids by 3%
- Increased capture rate by 11% to avoid retreating solids
- Increased belt press throughput by 32 dry tons per day
- Avoided overloading secondary clarifiers
- Eliminated spills in the polymer dissolution shed
- Improved operator safety

Polymer Optimization Increases Cake Solids and Throughput Resulting in Annual Savings of \$450,000

Drewfloc™ 2481 Polymer

Customer Challenge

A North American pulp and paper mill complained that its final sludge cake was too soupy and, on occasion, while being transported to the landfill, would leak out onto the road. Sludge would often pour out the sides of the belt press at the point where the top and bottom belts meet. Because the cakes were so thin, sludge would stick to the belt fabric and not release to the conveyor belt. The combination of sludge squeeze-out and poor cake release dropped the capture to an average of 85%.

Recommended Solution

Solenis recommend the installation of a new emulsion polymer dilution system and the use of Drewfloc 2481 polymer, a product with a higher cationic charge and a more branched structure. Changes were made to polymer aging, secondary dilution water was added, and the polymer feed point was relocated.

Results Achieved

Superior drainage and better solids capture were achieved with Drewfloc 2481 polymer, resulting in increased throughput of solids on the belt presses. The primary cost savings came from reduced hauling costs.



Sludge cake after treatment with Drewfloc™ 2481 polymer.