



INDUSTRIAL

SP SERIES IS SWEET IN HAWAIIAN SUGAR PLANT

MUCH BETTER UP TIME AND \$50K FLUSH WATER COST SAVINGS PER YEAR

A sugar cane producer in Hawaii was having issues with previously installed slurry pumps, transporting wastewater through a production plant. The liquid was abrasive, and the customer used rubber-lined slurry pumps to deal with the sugar's and plant fiber material's tendency to scour the inside of the pump.

The installed pumps needed frequently maintenance/service shutdowns, and required flush water for the seals. For the application, the specific gravity of the sugar slurry was 1.05%, the TDH was 60', the operational RPM was 470, and flow was 4,900 GPM.

Cornell Pump suggested our 10SP series because the customer preferred to stay with a slurry pump. The SP comes in metal and rubber-lined, 2"-12" discharge. Cornell suggested the metal liner to better deal with the abrasion. With the specific gravity and percentage of solids in the application, Cornell's MP or N series pumps in hardened material could have also handled the slurry.

Three 10 SPs were installed in 2014, and a fourth was held on standby. The spare was never used, even though the 10 SP's ran 24 hours a day, every day. The seals were not replaced, because they never leaked.

The Cornell 10SP pumps delivered an estimated \$12,000 a year in saved maintenance. An even bigger cost savings accrued to the plant by not requiring flush water. A typical 10" pump needs about eight gallons a minute of flush water for a mechanical seal. At 0.004 cents a gallons (average US price per gallon of municipally supplied water) that may not seem expensive. Eight gallons a minute run 24 hours a day, is 4.2 million gallons of flush water, at an average cost of \$16,800 a pump per year. The three pumps saved over \$50,000 a year in flush water costs.

The pumps operated for a little over two years, and save the producer over \$130,000 in operational costs. The plant ended up shutting down, because of overall world sugar prices.

Pumps provided to the sugar plant:

- Four 10SP Cornell Cycloseal® slurry pumps.
- Frame mounted with 150HP-1200rpm motors.
- Cast iron housings
- Chrome iron liner with chrome impeller
- Chrome iron back plate with Cycloseal®
- 150HP 230/460 volt, 1200 rpm TEFC motor
- Steel overhead motor base with belts, shives, and guard.
- 2 year warranty



Pumps installed in Hawaii (Piping was changed at the suggestion of Cornell Pump)



10SP pumps at Cornell await shipment.