

# CASE STUDY



Sugar cane in Isis Central Area

## Success in Primary Mud Pumping

### *Isis Central Sugar Mill, Queensland, Australia*

Isis Central Sugar Mill Co Ltd is a very progressive mill, working closely with the Sugar Research Institute of Australia. The mill purchased its first Discflo pump, a Model 403-14-2HHD, in 1993 for a refining operation, describing it as the only pump that would work in that application. They purchased a second Disc pump, Model 806-3HHD, for primary mud in 1998.

This case study is based on information received from David Pike, Production Superintendent of Isis Central Mill Co Ltd, in December 1998, concerning a trial for the second Discflo pump. David Pike comments:

"The trial on the Discflo for primary mud went very well and I am more than happy with its performance to date. The trial stemmed from problems associated with the failure of our (centrifugal pumps) and the need to find an alternative."

"The Disc pump handled the normal flow and mud consistency comfortably at a discharge pressure of 120 kPa at a speed of 760 rpm (11kW). It struggled with heavy muds and the discharge pressure would increase to 160 kPa. To overcome this problem, we installed a water flush point close to the pump suction which was solenoid activated when the pump was online. (We have a pump stop/start system depending on the mud mixer level). It required one or two turns on a manual valve and our objective was to maintain a discharge pressure of 120 kPa. After this addition we had no trouble handling any mud consistency."

"The previous pump - a recessed impeller centrifugal unit - was known to break flocs created during clarification. The process changes were immediate when the Discflo was brought on line. Our floc addition to primary mud just prior to the filter boots had to be reduced by 50-60% in order to bring our cake thickness and washing efficiency back to normal. The cakes immediately went from 6mm (Hydrostal recessed impeller centrifugal pump) to 25mm (Discflo) under the same floc to mud rates. At our current addition rate of 25 kg per week of LT 95 to mud, we would expect a saving of around 300 kg of floc annually."

### The Challenge

Centrifugal pump breaking flocs during clarification

Could not handle high solids

### The Discflo Solution

Cake thickness with Discflo increased from 6mm to 25mm

Saving 300kg floc annually

Discflo pump handles high solids up to 80%, high viscosity fluids



Call Discflo now to find out how our pumps can solve your problems.