



# Case Study

## Reduced Wear in TiO<sub>2</sub> Pumping

*Millenium Inorganic, Ashtabula, Ohio*

### The Challenge

Slurry with 50% solids

Wear of liners in centrifugals

Extra carrying fluid needed to prevent clogging

### The Discflo Solution

No close tolerances allows high solids pumping to 80%

Very little wear due to laminar, 'non-impingement' pumping

No extra carrying fluid needed

Discflo technology is working successfully in pumping a 50% solids slurry at the Ohio plant of one of the world's largest TiO<sub>2</sub> producers, Millenium Inorganic. In addition to greatly reducing wear, compared with the previous centrifugal unit, the Discflo pump requires less carrying fluid, saving energy in the drying process.

After more than a year's operation, a recent inspection (in April 2000) revealed very little wear inside the pump. This was achieved without the use of rubber linings. The savings from no longer using liners are significant; the liners on the centrifugal pumps had to be changed every 18 days, requiring several people to remove, fix and replace it. Plus, it was not unusual for a wrong liner to be used by mistake, causing the pump to go down in a single day.

Apart from some start-up hitches, the model 603-17-HHDL Discflo pump has run trouble-free. Three inspections have been carried out in this time. The last one showed some fatigue on the casing, but because the system requires a 3" suction line feeding a 6" discharge, the pump is almost certainly in a state of cavitation. Such conditions are common in belt press feed applications like this. The pump is designed for 125 GPM capacity, at 205 ft TDH, for a fluid of 1.4 specific gravity.

In addition to trouble-free operation, the Discflo pump has reduced the energy requirements for the drying process. Previous pumps required more carrying fluid to prevent the TiO<sub>2</sub> slurry from clogging on its way to the dryer. In fact the suction side had to be hosed almost continuously to keep the centrifugal pumps running. The Discflo pump however is designed to pump highly viscous fluids and does not require extra fluid. All in all, the staff at Millenium Inorganic have been very impressed with the performance of the Discflo technology.

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



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