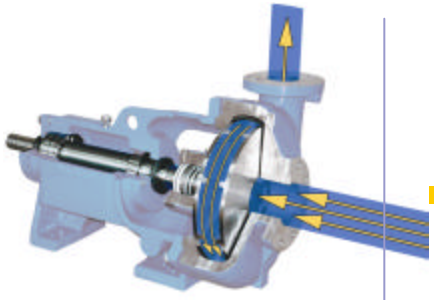

Case Study

Multiphase Booster Pump

Sincor, Zuata Region, Venezuela

The Challenge

Multiphase fluid, 4-phase

High sand concentration causing extreme wear rates

Emulsifaction of oil

The Discflo Solution

Discflo's unique open design handles high solids conc.

Non-impingement pumping reduces abrasive wear

Laminar flow through pump prevents oil emulsification

Sincor A.S of Venezuala plans to employ Discflo pumps to pump the notoriously difficult 4-phase fluid in it upstream surface facilities in the Zuata Region. Sincor choose the Discflo system based on its unique ability to handle high sand concentrations and high volumes of entrained gases, as well as Discflo's extensive experience in handling mutliphase fluids for a wide range of industries.

The application involves pumping an oil, water, gas, and sand fluid. Direct-coupled 20-inch Discflo models, using an 800kW motor, will be supplied. The pumps will be shipped in mid-2004 for start-up later in the year.

Multiphase pumping is now an accepted practice to the problem of handling fluid containing solids, liquids and gases. It not only reduces capital costs (by eliminating the need for vapor recovery systems and wellsite tanks), but also improves production rates and eliminates emissions.

The Discflo technology is uniquely engineered to solve many of the problems that plague positive displacement type pump systems in handling the extremely abrasive, high solids and gas-entrained fluids found in the oil industry.

Discflo pumps are neither PD nor centrifugal devices but rather use the highly innovative Discpac 'impeller'. The Discpac is a series of parallel rotating discs that moves fluid using the forces of boundary layer and viscous drag - natural hydraulic forces that are created by the discs' rotation. With fluid moving parallel to the rotating discs, fluid impingement on the pump's moving parts is minimized and flow is laminar rather than turbulent.

The result is unsurpassed durability and resistance to abrasion. The space between the discs is large enough (up to 8" in the largest models) to prevent solids from clogging the pump, allowing solids concentrations of up to 80% to pass through unimpeded. Similarly, entrained air and gases move through the pump without impinging on the discs, ensuring there is no mechanical failure or cavitation.

Equally important, the Discflo pump's laminar flow pattern prevents oils from emulsifying. This improves oil recovery rates compared to other pump devices on the market, and makes filtration easier, if necessary.*

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

* Contact Discflo for independent test data on emulsification..

DISCFLO
Disc Pumps

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