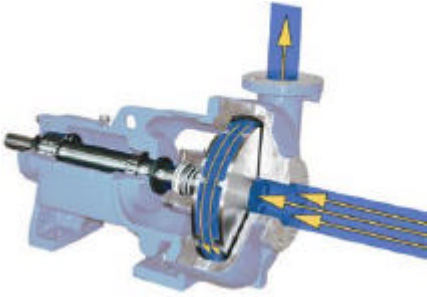


# CASE STUDY

## Problem-Free Sulfur Slurry Pumps

*Geneva Steel, Provo, Utah*



### The Challenge

Highly abrasive slurry, with steel fines, ash, grit, sand, nuts, etc

Existing PD pumps required rebuild every 45 days

Frequent breakdown

### The Discflo Solution

Discflo pump's 'boundary layer effect' minimizes abrasive wear

No downtime, repairs in 2 years

Disc pumps' flexibility allows double service

Since 1989, Geneva Steel has spent millions of dollars to modernize its production facilities in Provo, Utah. One of the important elements of Geneva's modernization is an oven gas sulfur removal system that went into operation in 1993 to reduce emissions of sulfur from the conversion of coal to coke.

The desulfurization process requires two pumps that move sulfur slurry from a storage bin onto a conveyor belt. The sulfur slurry is about 30% solids and highly abrasive, containing steel fines, carbon and ash, grit, sand, rocks, gravel, and even nuts and bolts.

Pumping the abrasive slurry was a real nightmare. No pump from among the more than dozen types employed at the plant seemed to be able to handle this application satisfactorily. Pump wear was severe and breakdowns were frequent. In 1999, two positive displacements pumps were being used in the application. They required almost constant maintenance and rebuilds every 45 days.

Working with Mark Vehweig of Metaltex, Discflo Distributor in Salt Lake City Utah, Geneva installed the first pump Disc pump in December 1999. Installation of the Model 2015-8-2HHD pump ended a maintenance nightmare for the plant. Geneva was so pleased with the performance that another Disc pump was ordered a month later to replace the second positive displacement pump.

Alfy Blaney who manages the spare parts operation calls the Discflo pumps his "wonder" pumps. He says they are critical to the process and Discflo is a dream because he never has to bother with them. "The only thing you need to do to these pumps is turn them on."

The Discflo Disc pumps have worked continuously without downtime or repairs for the past 18 months (reported March 2001). It is estimated that they paid for themselves in just a few months, compared with the previous PD pumps.

The system has turned out to be very flexible as well. When the desulfurization process is completed, a simple change in the piping array is made and the Disc pumps are used to empty the 145,000 gallon MEA tanks into fuel cells for storage. (MEA ethanolamine is the substance that removes the sulfur from the coke gases.)

"Mr. Blaney has been so impressed with Disc pumps," said Mark Vehweig of Metaltex, "that he has shown them to managers and maintenance people in other parts of the plant. Now there's a lot of interest in the Disc pumps for other applications." The mill has subsequently purchased three more pumps.

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

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INTELLIGENT. SUSTAINABLE. SOLUTIONS