

Case Study

Rohm and Haas, Louisville, Kentucky

From a maintenance standpoint, the pumps were totally dismantled and reassembled in 2 hours, excluding a rebuild of the seal. The John Crane 5620 pump seal was found to be well designed for this emulsion application, imparting only 0.05 GPH of water into the process fluid while running.

The report found that the main drawbacks of the Discflo pump are the initial cost, and the relatively flat pump curves. However, compared to the air-operated double diaphragm pump (presently used), Rohm and Haas estimated that the Discflo pump will break even after three years of life due to the lower operating and maintenance costs. See table below for comparison. The flat pump curves are easily solved with the addition of a VFD.

Type of pump	Air-operated Double Diaphragm pump	Disc Pump Model 403-14-2HHD
Initial cost	\$4500	\$20,000
Installed cost	\$6750	\$30,000
Operating cost (to pump 60GPM)	\$1.21 / hour	\$0.20 / hour
Maintenance cost (labor and parts)	\$2500 / year	\$750 / year (projected)

Rohm and Haas described the main advantage of the Discflo pump as the shearless nature of the pump's operation. Discflo pumps have the ability to handle high viscosity fluids, high solids (over 1-inch), and highly aerated fluids easily. With a VFD attached, the Discflo pump can be tuned to control/vary fluid flow rates at discharge pressures. Designed with a fully flooded suction, the Disc pumps can easily pump a tank empty.

Rohm and Haas concluded their report with the following recommendation

"Discflo pumps should be considered a viable alternative to (*competitor*) pump for emulsion transfers. This pump should prove very effective in the latex emulsion tank to tank transfers and also in C2 processing."

"Assuming that the pump runs 50% of the year, the break-even point for the Discflo pump compared with the air-operated diaphragm pump is at three years."

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



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