CHEMICAL & PETROCHEMICAL

Quick STUDY

Hydra-Cell® Seal-less Pumps

www.Hydra-Cell.com

Location:	United States
Application:	Pumping hydrochloric acid
Media:	• Hydrochloric acid
Model No.:	D03BATETTTPJ
Flow Rate:	1.06 gpm (4.0 l/min)
Pressure:	304 psi (21 bar)
Hydra-Cell Advantages:	• Several materials available including Hastelloy® C, FKM, and Polypropylene • Compact design • High efficiency • Technical support

Entrained Gas Eliminated from Acid System

This customer was pumping hydrochloric acid with a pump constructed in Hastelloy C. It was large and inefficient and spare parts were difficult to obtain. The unit was replaced with a Hydra-Cell D03 pump in the same material - but a problem arose. The Hydra-Cell pump worked well at start-up, but after a 30-minute idle period it was losing prime.

Normal troubleshooting routines did not help, but it was determined that air was being entrained in the pump head. What was the cause? Working together, distributor and customer discovered that a gas was formed when the acid passed through stainless steel fittings on suction and discharge ports. It was a system issue, not a pump fault.

Conversion to non-metallic fittings solved the problem completely and the Hydra-Cell pump now works perfectly. Unlike the unit it replaced, it is compactly built and very efficient, and spare parts are readily available.

Characteristics of Fluid Pumped:

○ Contains Abrasives ● Corrosive ○ Solids in Suspension ○ High-temp. (>158˚F/70˚C) ○ Non-lubricating ○ High-viscosity (>500 cPs)