



WANNER
Hydra-Cell[®]
 Seal-less Pump Technology

Case Study

Reliable pump ends constant hose replacements at formic acid plant

Pump reliability and repair costs became serious issues for Indonesia-based Sintas Kurama Perdana, a major manufacturer of formic acid, when it was found that a peristaltic pump installed to transfer methyl formate from another plant could not satisfactorily handle this essential input. Premium quality hoses costing €194 each lasted no more than 14 days and continually had to be replaced. A seal-less Hydra-Cell G25 pump installed in place of the hose pump was still running without interruption 8 months later.



Pump code: G25EKSQHFHHA

Formic acid is a versatile product much used as a preservative and antibacterial agent in animal feedstuffs. On this application it is usually sprayed on feed or fresh hay to reduce the rate of decay. It is also used as a pesticide to control mites that infest honey beehives. Other uses include textile dyeing, leather tanning and electroplating.



In the oil and gas industries it can be used as an acidiser for reservoir stimulation in enhanced oil recovery.

Production of formic acid is a continuous process in which methyl formate plays a vital part, being converted into the acid by hydrolysis.

However, the methyl formate as pumped contains particles and is sometimes dirty. The hose pump, from a well-known manufacturer and operating within its rated performance, could not in practice handle the contaminated liquid. Poor reliability, frequent interruptions and the high cost of spares persuaded plant management that a change was necessary.

The company's remedy was to take the hose pump out of service, replacing it with the seal-less Hydra-Cell G25.

Customer - Sintas Kurama Perdana

Sintas Kurama Perdana is one of the numerous Hydra-Cell customers who have appreciated the practical benefits of our seal-less pump technology and subsequently shared their experience with us.



Hydra-Cell's unique design has several features specially relevant to this application. They include absence of dynamic seals, with no parts at risk of premature wear from abrasives. The hydraulically balanced flexible diaphragms that provide the pumping action operate stress-free irrespective of operating pressure, while totally isolating liquid end from drive end of the pump.

Wetted parts are available in a variety of resistant materials compatible with the liquid being handled. With multiple diaphragms in a single compact pump head, liquid flow is smooth and virtually pulseless. The pump can run dry without risk of damage. Routine maintenance is minimal and spare parts inexpensive.

The G25 is operating well within its performance range (up to 4620 l/hr flow and 70 bar pressure) against system specification of 2500 l/hr max flow and 10 bar pressure.



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