AESSEAL®
ENVIRONMENTAL TECHNOLOGY

Efficient seal support system reduces energy costs

A chemicals manufacturer in the USA was concerned about high energy associated with the sealing of a hot glycol pump.

The hot glycol pump was fitted with a single seal with an API Plan 21 seal support system. Plan 21 takes process fluid from the pump discharge and passes it through a heat exchanger to reduce it temperature before injecting this cooled fluid into the flush post of the mechanical seal. This is a thermally inefficient process as the glycol requires contend reheating in order to maintain the required heat transfer temperature. AVT Sealing Solutions were approached for an alternative solution.

AVT Sealing Solutions recommended replacing the seal with an AESSEAL® SMSS23™ with API Plan 23. Plan 23 is a far more thermally efficient piping plan. The SMSS23™ has a pumping ring on the outboard side of the seal which pumps a small volume of process fluid towards the flush port of the seal. The fluid is then cooled by a heat exchanger before returning to the seal. The solution was installed in March 2016 and the customer has found that the seal ran cooler and the energy required to maintain the glycol temperature was dramatically reduced saving an estimated $3,800 / year. In addition, the MTBF of the seal has improved from 2 years to 4 years.

‘Energy savings of $3,800 each year’

Industry:	Chemical
Product:	SMSS23™
Application:	Hot glycol pump
MTBF Increase:	100% (and counting)
Energy Savings:	$15,200 (and counting)
Reference N.O:	CS0036