



ENVIRONMENTAL TECHNOLOGY

## **AESSEAL® cuts water usage by 75 percent at US company**

A US mining company was concerned that its large end suction pumps were using excessive amounts of water and that the packing was damaging sleeves, resulting in high costs for repair and maintenance.

Maintenance personnel were having to make frequent adjustments to the packing in an effort to minimize the leakage of water, which at temperatures of up to 400 degrees Fahrenheit, raised serious health and safety concerns.

Packing needs to press tightly against the rotating shaft on a pump to achieve the most efficient seal. However, the resulting friction means the packing must be lubricated with high volumes of flush water to prevent overheating. It also gradually wears away the pump shaft sleeve, increasing the risk of external leakage. This leads to high maintenance expenditures, which can be avoided with mechanical seals and support systems.

In response to the problems being faced by the company, AESSEAL® proposed the installation of double mechanical seals with seal-support sealing systems specifically designed for use in the mining industry. These increase uptime and tackle the problem of reducing water consumption – particularly advantageous in deep mines where water often has to be pumped, at high cost.

The seals and seal support system were coupled with an SW25™ water management system. The water usage resulting from inefficient packing was reduced from 8-15 gpm to 2.5 gpm on a heat exchanger. This had the effect of reducing the cost of operation, while also improving MTBF and profit margins. The improvement in the MTBF means a reduction in repair costs and improved reliability. The overall system is now more efficient and cost-effective, with repair savings of \$72,000 yearly and an estimated saving of over 3.6 Million Gallons water each year for just one pump. The new system has been such a success it is going to be installed on a second pump.

## **‘Uptime increased and water reduced in deep mine’**

<b>Industry:</b>	Mining
<b>Product:</b>	SW25™
<b>Application:</b>	Suction Pumps
<b>Water Savings:</b>	>3,600,000 per year per pump
<b>Savings:</b>	\$72,000 per year
<b>Reference N.O:</b>	TD3100060



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