



ENVIRONMENTAL TECHNOLOGY

Paper producer saves over \$1 million per year

A leading North American producer of pulp and paper has recognized the importance of operating the business in a sustainable way.

This involves not only responsibly sourcing wood from sustainably managed forests and generating renewable energy to run its facilities, but also improving safety performance and operating the plant efficiently. When presented with an opportunity to reduce plant energy and water usage while improving pump reliability, the company was keen to hear more.

AESSEAL® started working with the company after being asked to review a number of 'bad actor' pumps at one of the sites. The pumps had been sealed using a competitor's product, with flush water to sewer and/or into the process stream. Success with sealing these pumps has led to a collaborative relationship between supplier and customer.

As part of this collaboration, AESSEAL® undertook a seal reliability and energy audit to evaluate seal and piping plans of each pump. The audit revealed by upgrading a number of pumps with the latest dual mechanical seal and water management systems, would have a positive impact on reliability and sustainability. This was to have the benefit of reducing water and energy usage, while improving pump reliability.



'Energy Savings of \$900,000 per year'

| | |
|----------------|---|
| Industry: | Pulp & Paper |
| Product: | Dual seals and water management systems |
| Application: | Various |
| Savings: | >\$6,000,000 |
| Reference N.O: | pnp1017 |



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AESSEAL® installed the first upgrades in January 2013 on three chemical mixers. With the upgrades installed, the reliability of the three chemical mixers improved significantly. Three effect pumps were also upgraded in 2013 and these have given energy savings of \$30,000 per year.

In 2014, 14 pumps were upgraded, which have given additional energy savings of over \$400,000 per year, and in 2015 a further 25 pump sealing system upgrades gave an additional \$455,000 in energy savings and almost \$100,000 per year in maintenance cost reduction.

By eliminating the need to reheat and evaporate injected water the company is saving a total of over \$900,000 in energy costs per annum. In addition, improved reliability has reduced maintenance expenditure by \$130,000 per year.

Since AESSEAL® started working with the company in January 2013, the latest dual mechanical seals and seal support systems have been installed on numerous plant locations in the USA. One facility has over 70 dual seal and support systems in operation. Over six years the company has saved over \$1.76 million on maintenance and almost \$3 million in energy costs by upgrading pumps sealed with packing or single mechanical seals to the latest dual mechanical seals and systems.



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