



## Success with bad actor pump leads to further opportunity

A pulp mill in the USA were experiencing issues with the sealing arrangement on the green liquor transfer pumps.

The pumps were sealed with a competitors dual mechanical seal along with an API Plan 55 seal support system. The plant had inconsistent water pressure which with the Plan 55 configuration led to poor fluid film consistency. Initially the seal support system was configured as API Plan 54. When the water pressure was lower than the process pressure, green liquor would migrate across the seal faces into the seal water supply. This would lead to blocking of the flow control device, so this was removed (changing the system to an API Plan 55 configuration) leading to the worry of the seal running dry when the seal water pressure was low. The green liquor pumps are critical as loss of these pumps would cause shut down of the recovery boiler, so in the event of pump problem the plant would be forced to perform an emergency overhaul. With a mean time between failure (MTBF) of between 3 and 4 weeks, after unsuccessfully trying low cost solutions from a number of different mechanical seal suppliers, the customer approached AESSEAL® for assistance.

AESSEAL® recommended replacing the existing seal with a DMSF™ along with a SW325™ seal support system. The new solution was installed on the two green liquor pumps in November 2017. The MTBF of the pump has improved to one year (as a result of liquor build up in the pump discharge pipe). The customer has saved over \$100,000 and reduced water consumption by around 5 million gallons per year. The plant are now in the process of upgrading further pumps.

### '5 million gallons of water saved per year'

Industry:	Pulp & Paper
Product:	DMSF™ and SW325™
Application:	Green Liquor transfer pump
MTBF Increase:	1200%
Savings:	US\$100,000
Reference N.O:	CS0091

