



Unique solution saves \$287,000 a year and improves safety

One of the world's largest nutrition companies was dealing with repeated downtime due to problems with clean condensate pump seals on a corn wet milling application at its plant in Illinois, USA.

Regular seal failure was impacting eight pumps on the evaporative system. The primary cause was dry running due to the high temperature of the condensate (180°F). Mean time between failure (MTBF) never extended beyond six months.

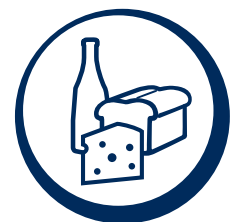
When a seal failed, the entire system had to be shut down for up to 24 hours to enable time for cool-down, draining, lock-out, tag-out (LOTO) and changing the pump, then system unlock, reheat and restart. This consumed excessive maintenance time and detracted from other operational duties.

Additionally, a failing seal would be allowed to leak for as long as possible before remedial action was taken, in order to limit downtime. The leakage of hot condensate posed a health and safety risk to operatives working near the pump.

The company trusted AESSEAL® to engineer a unique solution to the problem.



Industry:	Food & Beverage
Product:	CDFI
Application:	Clean condensate
MTBF increase:	900%
Savings:	US\$ 287,000 / year
Reference N.O:	15022021-CKA01





ENVIRONMENTAL TECHNOLOGY

The AESSEAL® system involved installing a 25 litre clean condensate tank, with two 3m stretches of cooling finned tubing, and a CDFI™ dual mechanical seal with a pumping ring to force the exchange of water between seal and vessel.

This enabled heat to be ‘dumped’ through the finned tubing and vessel, providing the optimal operating temperature for the seals on the eight evaporative system pumps. The protection from excessive heat improved seal efficiency, eliminated leakage and expanded their lifespan.

The pumps have operated problem-free since installation and MTBF is projected to rise from a maximum of six months to roughly five years – a 900% increase. Return on investment was achieved within five months.

The project was so successful that the company decided to upgrade the sealing system on all 30 clean condensate pumps at the plant. The investment, totalling just under \$108,000, is projected to achieve annual savings of almost \$287,000.

The improved safety for the workforce is incalculable.

Industry:	Food & Beverage
Product:	CDFI
Application:	Clean condensate
MTBF increase:	900%
Savings:	US\$ 287,000 / year
Reference N.O:	15022021-CKA01



aes seal.com/info