

CENTRIFUGE PULSE WATER VALVES CLEANED UP**BACKGROUND**

The use of water as a pre-wetting, or post flushing agent on centrifuge technology is important to keep contact surfaces clean, particularly in beverage and slaughter applications.

It is common for dairy factories, breweries, wineries and slaughter houses to use centrifuges as clarifiers to remove solids from liquid streams, in applications such as whole milk clarification, yeast clarification, or fats clarification.

Centrifuges may be fitted with either diaphragm solenoid valves, or fast acting pneumatic butterfly / ball valves to deliver the "pulse" of water into the collection chamber.

In high duty cycle applications, these pulse valves can be actuated as often as every 2 ~ 3 minutes.

Wear and tear on these valves is typically high and is apparent either as internal seat leakage, or for rotary actuated ball / butterfly valves, it is common for the glands to fail, causing the valve to leak externally.

PROBLEM

Premature failure of pulse valves can cause an undetected waste of water if the seat leaks. Gland failures can result in damage to actuators, as well as housekeeping issues with external leaks.

A major Alfa Laval™ centrifuge user in a brewing application had issue with the high duty cycle requirements of their yeast clarification process. With the centrifuges operating normally 16-20 hours per day to match production, and ejections occurring every 3 ~ 5 minutes, the clients best in class pneumatically actuated ball valve would last 4 ~ 6 months before either the glands failed, or the seat would wear, causing a waste of water, and a measurable current rise to drive the centrifuge.

A failure of the gland seals would often cause water under significant pressure to prematurely fail the actuator, causing additional expense.



Alfa Laval™ BRPX717 (Brew2000) / Emech F2-025

SOLUTION

The installation of an Emech F2-025 with sanitary socket weld end preparation has been met with long term maintenance and housekeeping savings for the client.

Emech was able to provide an ISO matched coupling and mounting bracket to fit the customer's preferred Morin™ actuator, and these valves have now been in service for more than 2 years with no seat, or stem leakage.

The patented ceramic disc technology delivers FCI 70-2 Class VI bubble tight shut off capability, and seat wear characteristic described by the client as a "new best practice standard, with performance beyond anything ever used."

Accurate tolerance design and manufacture delivers a high performance valve, which is robust both in seat performance, as well as superior stem leakage characteristics generated by a pure turning moment.

Contact Emech directly or your local distribution representative for more information.