KlickFix®

James Walker

Case Study: Paper mill process pump shaft sealing

Problem

Frequent catastrophic failure in operation

Massive cost implications from a typical seal life of 9-11 months before unpredictable catastrophic failure - leading to a great deal of time spent on maintenance and clean up.

Application

Single stage centrifugal process pump within a paper and board mill in Canada.

- Shaft diameter: 57 mm (2¼")
- Shaft speed: 1780 rpm
- Stuffing box pressure: 0.9 bar (90 kPa)
- Flush pressure: 1.12 bar (112 kPa)
- Media: paper stock 3% to 5% concentration

Existing solution

Cartridge mechanical seal

James Walker solution

No leakage, no adjustment in over 3 years

In an effort to assist the customer in reducing their costs and time spent on excessive cleaning and maintenance, a KlickFix® cartridge was installed. The cartridge uses a sequentially deployable sealing lip system to minimise downtime and eliminate the risk of catastrophic failure, which was a regular occurrence with the mechanical seal. The quick and simple process of utilising the stored lips in the cartridge would offer the

Results and benefits

The KlickFix® unit has performed for over 3 years and 5 months leak free - an exceptional improvement to the previous solution.

Not only has the customer saved money on the seals, they have been able to realise savings in terms of maintenance, production downtime and clean-up as a result of failure in operation.

In addition, the flush rate has been reduced using the KlickFix by 90% to less than 2 US gallons (7.57 litres) per hour.

- **No adjustment required**
- **Zero leakage in operation**
- **Cost savings on maintenance, as well as from process improvement**
- **90% reduction in flush water consumption**