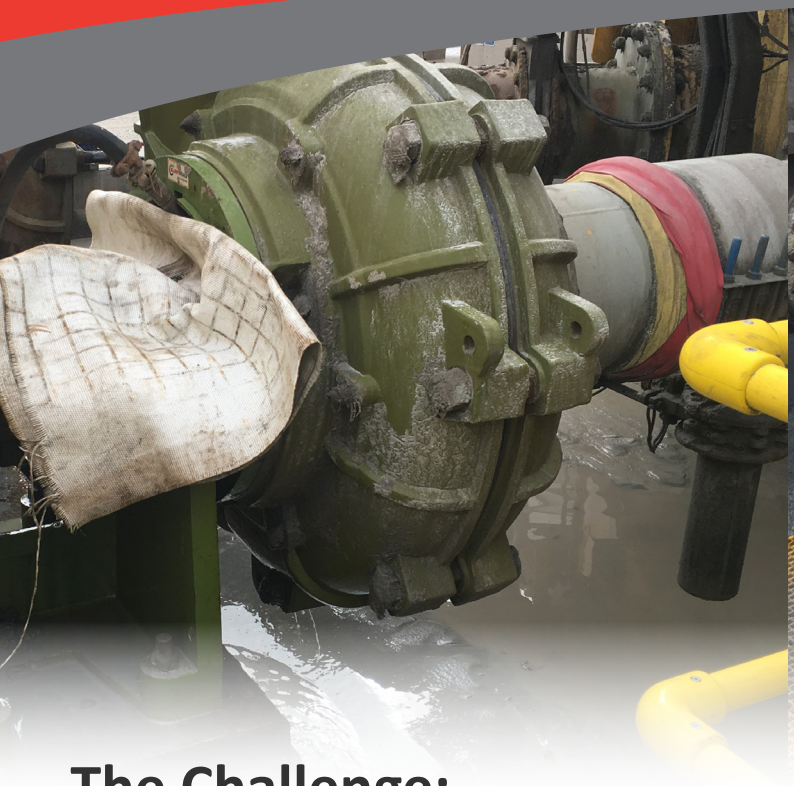
Chesterton 442 Seals installed in Warman Slurry Pumps

Case study



The Challenge:

A client in the Gold Mineral Processing industry was reviewing the gland sealing life of their critical pumps in Tailings discharge and Cyclone Feed. It was found that the frequent gland failures and lack of proper adjustment of pump packing had a direct impact on the life of the pumps bearing barrels. Because of bearing failure due to moisture ingress, unscheduled pump refurbishment was frequent and in turn, caused the replacement of high cost wet-end components well before these parts (volute liners, impellers) had reached their full life cycle.

A solution was required to maintain an efficient seal and to control leakage to prevent further bearing contamination.

The Solution:

Over a long period of time, trials were initially conducted with various manufacturers pump packings and gland flush control configurations. As this progressed with better benchmark data obtained, other options were considered to improve MTBR. In conjunction with PUMPNSEAL, a trial was offered with Chesterton's 442 Split Mechanical Seals (7.00" and 220mm). The initial advantage was a mechanical seal that was split could be installed with out taking apart the wet-end of the pump. The runtime of the 442 mechanical seals with silicon carbide sealing faces and a Plan 32 controlled flush far exceeded everyone's expectations. So much so, they have been adopted this technology on all the larger slurry pumps throughout the milling operations.

Features and Benefits of using Chesterton 442 Mechanical Seals:

- No pump modification required and can fit directly to Warman and Krebs pumps
- Runtime typically exceeds 15,000+ hours on 12/10 and 16/14 AH series pumps
- No wear on the pump sleeve
- No pump disassembly required to change seal faces or re-kit
- Reduced gland water flush
- Eliminates early replacement of pump liners and impellers

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