

170L with SpiralTrac™ Resolves Issues Caused By Aging Water Supply Lines in Uranium Mine

Mining | Ground Uranium Slurry | Mechanical Seal



Application Info & Challenge

- **Location:** Canada
- **Equipment:** Warman 4/3 D-AH Horizontal Container Feed Pump (85mm shaft size)
- **Product:** Ground uranium slurry, 10-40 °C temperature, 7.5 PH
- **Solids:** Typically, 40%, can be as high as 60%
- **Flush:** No flush because process fluid cannot be diluted
- **RPM:** 1500-1800 RPM



No Flush

This application involves a local uranium mine experiencing frequent seal failures on their Container Feed Pumps using competitor double seals (Plan 53). Seals typically fail every 8 weeks.

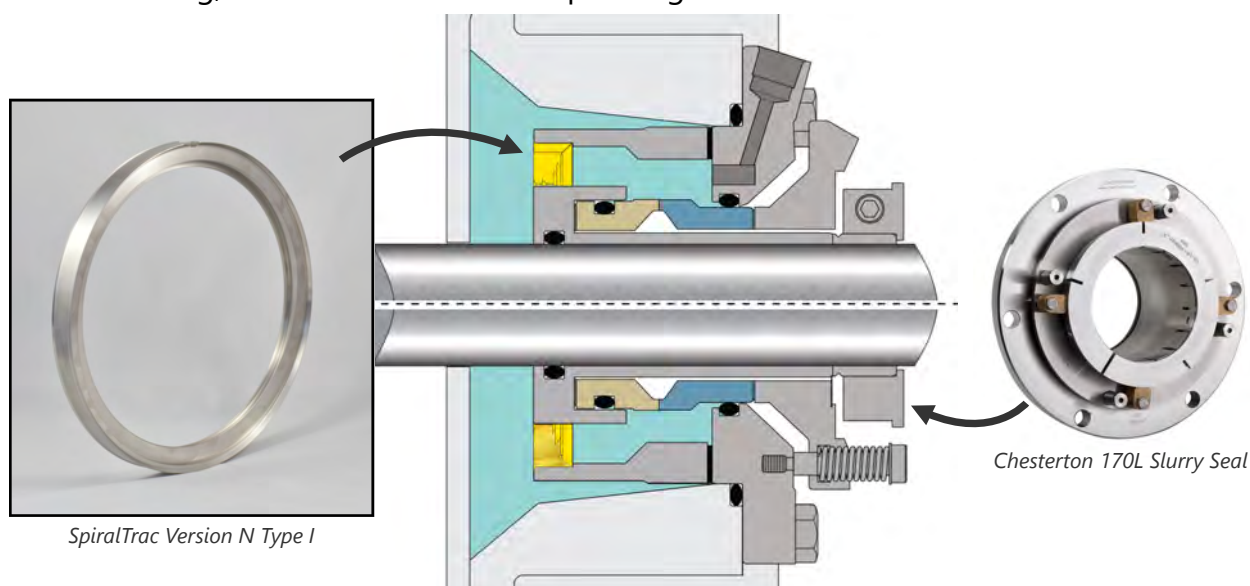
The failures were largely attributed to particulate contamination in the seal water supply caused by internal corrosion and scaling of **aging black iron piping**, which degraded flush water quality and accelerated seal wear. Customer goal was finding a viable solution without having to upgrade the entire plant water supply system.

Solution & Result

- Chesterton 170L dry end standard seal configuration with SpiralTrac upgrade.
- **SpiralTrac Version N Type I** made of 316 stainless steel, part # NM11293R15248(316)18-0419

Due to the high cost of upgrading the water supply system, a single seal design that operates without an external flush was implemented, eliminating reliance on flush water completely. The robust Chesterton 170L Slurry Seal is specifically designed to fit Warman® AH® series pumps. The incorporated SpiralTrac further enhances seal performance! This solution reduced seal costs by approximately 40% compared to the double seal arrangement!

As of writing, this solution has been operating with no issues for over 11 weeks!



SpiralTrac Version N Type I

Chesterton 170L Slurry Seal



Original Double Seal Setup with Barrier Fluid Tanks

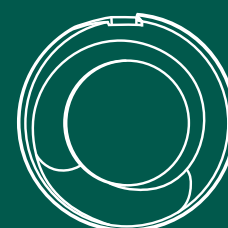


No Flush Chesterton Solution Installed



170L Dry End Standard Configuration with SpiralTrac

For more information please send an email to us at support@enviroseal.ca. We hope to hear from you!



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