

Elbow Pumps Converted from Packing to Split Seals and SpiralTrac™



Ore Processing | Sodium Carbonate | Mechanical Seal

Application Info & Challenge

A Trona ore processing plant required a mechanical seal design for their Goulds Elbow pumps for pumping of **sodium carbonate**. The current OEM design used a lantern ring with 5 rings of packing, which had excessive leakage, high flush requirements, and had a short MTBF!

Requirements include relative high temperature, low pressure, low RPM:

- Speed: 200 RPM
- Temperature: 180-200 F
- Stuffing Box Pressure: 15 Psi

Solution & Result

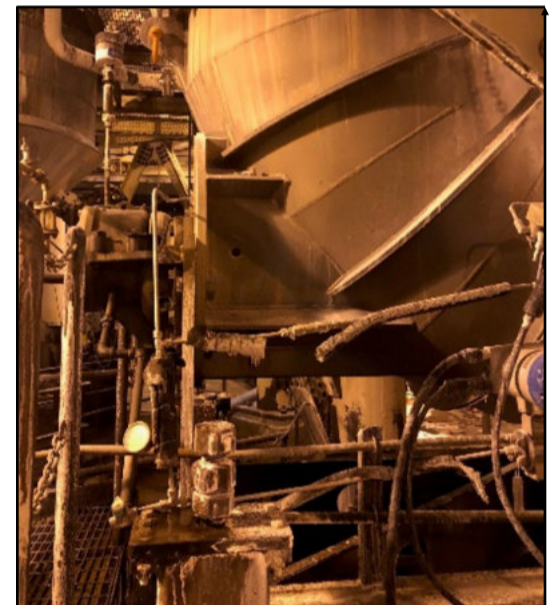
- 1996: Chesterton 221 Jumbo Split Seals 8.500" & 12.875" CB/SC/EP
- 2016: Chesterton 442 Split Seals 8.500" & 12.875" RSC/RSC/EP
- **SpiralTrac Version F Type S** Split, made of Carbon Graphite PTFE, part# FI8500RS10500(ESC) & FI12875LS14875(ESC)

The 221 provided the right solution being the first off-the-shelf split mechanical seal. The heavy duty split design offered a robust platform and provided the ease of installation the customer was looking for.

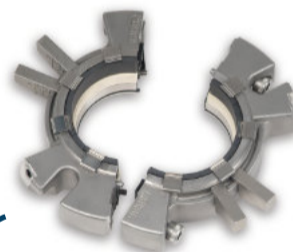
This solution was first installed in 1996 with multiple pumps still running in 2022. The solution was upgraded to 442 Seals in 2016. Operational duty cycle is batch process and it is operating with little to no leakage and with drastically reduced flush rate compared to original packing setup. Customer is extremely satisfied!



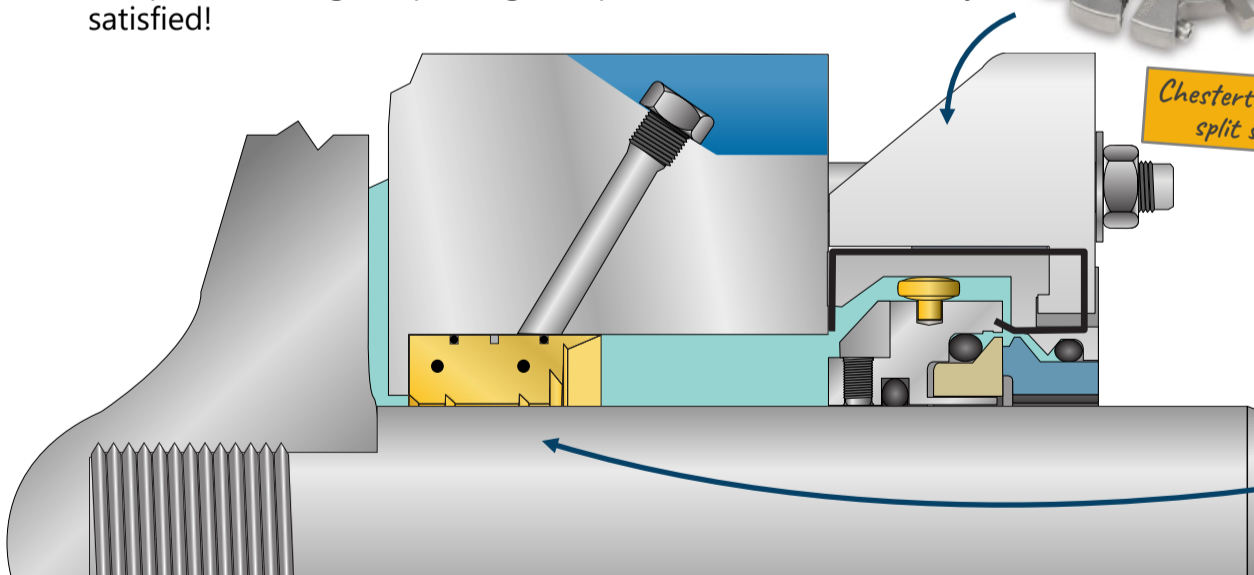
442 Split Seal installed



View of Goulds Elbow Pump



Chesterton 442 split seal



SpiralTrac Version F Type S



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



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