CHESTERTON
Global Solutions, Local Service.

Mine Dewatering - Brine Sealing

Rotating Equipment Sealing Solutions

Mining/Mineral & Ore Processing
Chesterton 280 Heavy Duty Dual Seal
Case Study 012 RE

Challenge

This European potash mine, 1.5 miles underground and 5 miles out beneath the ocean, uses multiple centrifugal pumps to remove brine solution from the mining operations. In this mine, brine water continuously leaks through the earth's strata and must be continuously pumped out to eliminate mine flooding.

This is important for the safety of the workers, as well as life and reliability of the mining equipment.

Brine is a crystallizing solution, and solids migrating through the seal faces need to be controlled to optimize sealing reliability.

Solution

Chesterton 280™ Heavy Duty Dual Seal with Plan 54

The **Chesterton 280 Dual Seal** is designed for heavy duty service applications such as brine solutions, with an advantage of a "back-up" seal.

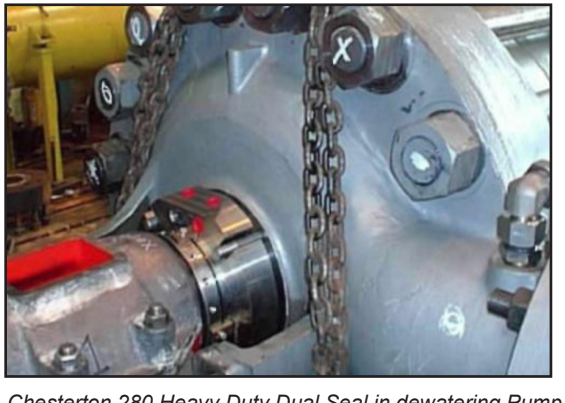
Using Environmental Control Plan 54, a higher-pressure forced circulated barrier fluid will provide a clean lubricating fluid between the seal faces, preventing abrasive solids from penetrating the sealing interface.

Increased seal reliability and extended seal life can be realized with this solution.

Results

The Chesterton 280 Dual Seal has successfully been sealing the dewatering pumps in this potash mine since 1999!

- Sealing reliability and seal life has increased significantly
- Maintenance costs and pump downtime have been reduced

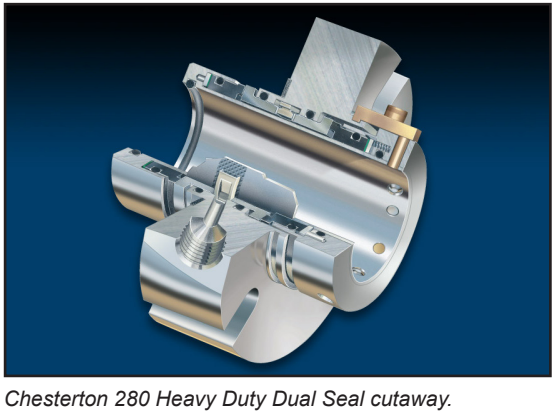


Chesterton 280 Heavy Duty Dual Seal in dewatering Pump.

Why use Chesterton's 280 Heavy Duty Dual Seal?

- High torque capability
- Heavy duty rugged design
- Unified seal face alignment to accommodate axial motion capabilities
- Monolithic seal faces
- Self-centering lock ring
- Micro-polished O-ring surfaces

Chesterton 280 Heavy Duty Dual Seal.



Chesterton 280 Heavy Duty Dual Seal cutaway.

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