

### Challenge

A large steel plant in Italy was having difficulty reliably sealing their waste coal slurry pumps. The pumps were integral to their water treatment operation.

The waste slurry was a semi-solid consistency at 28% solids and difficult to pump. The steel mill tried several sealing solutions, from a single mechanical seal with a Plan 32 flush to dual seals with a barrier fluid supply. None were successful, and the plant wanted a better option.

The best seal life the mill operators were able to obtain was 3 to 4 months MTBF. They needed a better sealing option!



Waste Coal Slurry – 28% solids.

### Solution

The **Chesterton 170 Slurry Cartridge Single Seal** was installed in one of the waste coal slurry pumps without a flush.

The **Chesterton 170 Slurry Seal** is a single seal designed to handle harsh slurries (up to 40% solids) without a Plan 32 flush.

The unique design of the **Chesterton 170 Slurry Seal** incorporates a high-strength drive system to give the seal higher torque capabilities. The innovative pressure plate system also keeps the springs entirely outside the seal.

#### Why Use the 170 Slurry Seal?

- Non-clog pressure plate design
- Springs located entirely outside the seal
- Simple robust design
- Micro-polished seal faces
- High strength quadra-drive system
- No quench required

### Results

**The first seal operated for over 3 years without a flush!**

Due to this greatly improved reliability, the steel mill standardized all their waste coal slurry pumps to the **Chesterton 170 Slurry Cartridge Single Seal!**

To date, all installed **Chesterton 170 Slurry Cartridge Single Seals** have greatly improved the plant's sealing reliability and have increased the plant's run time.



Chesterton 170 Cartridge Slurry Seal installed.