Mineral Processing - Potash Processing Plant Case Study | No.3





Hot sylvinite leach at 114°C/237°F

ICL group, Dead Sea Works Israel | 1987

Working conditions:

Extremely high corrosive liquid, high working temperature, and mild conditions

Pipes used:

Pexgol Ø225, Ø280 mm

Application:

Transportation of high temperature KCL+NaCl brine

Length:

Straight sections of a few meters; 40 meters in total

The Challenge

The highly concentrated brine and temperature of the hot leach cycle: up to 114°C/237°F at the Dead Sea created a highly corrosive environment, which reduced the life of the original pipes dramatically. Working conditions were so extreme that lifespan of the previous steel piping was only 8-12 months.

The Solution

The installation of a Pexgol pipe that has been in use at this potassium process plant for over 20 years without any failures or need to be replaced. The pipe's high resistance to abrasion, corrosion and high temperature resistance drastically reduced the changeover in the piping system and have proven to be the best solution for this client.





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Advantages

• High resistance to wear:

Pexgol is the preferred solution for abrasive materials transportation. Typically resists three times more than HDPE and twice more than steel.

• Excellent chemical and corrosion resistance:

Pexgol pipes can resist a wide range of chemical agents, slurries, toxic and radioactive materials.

• High temperature resistance:

Working temperatures can range from -50°C/-58°F up to 110°C/230°F.

• Superb internal and external corrosion resistance:

Our pipes are proven to withstand decades of exposure to corrosive environments, with non-stop performance in some of the world's harshest environments.

Low weight:

Compared to steel or rubber, Pexgol's solution results in reduced transportation, storage and labor costs due to lower weight per meter.

• Long pipe sections:

Pexgol's pipes can be supplied in long lengths coils, reducing number of joints, installation time and risk.

• Creep and impact resistance:

Pexgol's crosslinking piping solution can withstand high amounts of axial and radial stresses and are highly resistant to impact, fracture and fatigue.

Our pipes are also completely resistant to cracks

– even when dragged over sharp rocky terrain and coagulated salt crystals.





