



Scale build up reduction - highly concentrated lime solution

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SQM
Nueva Victoria-Iquique
Chile | 2010
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Working conditions:

Corrosion and material build-up with high concentration

Pipes used:

Pexgol 315 x 28.6, Class 15

Application:

Transport of highly concentrated brine solution

Length:

12 meters

The Challenge

As the solution was being pumped, calcium carbonate deposits caused clogging in the existing HDPE pipe wall in both the straight parts of the circuit as well as the elbows. This clogging prevented the evaporation pools from receiving the required amount of lime water. Clogs formed every 2 months, affecting production.

The plant's operators needed to reduce this effect or eliminate it by replacing the pipe with another.

The Solution

Due to the replacement of HDPE pipes with the smooth internal surface of Pexgol's pipes, clogs were completely eliminated. In addition, the production and transportation of the new pipes in coils reduced the number of joints, which was a major source of deposition.

A Pexgol pipe was installed between two HDPE pipes and connected by Vitaulic joints 994. After two months the pipes were removed for inspection and no deposition was found, while the HDPE pipe did. Since the installation of the new pipes in 2010, the original Mean Time Between Failures (MTBF) of the HDPE pipes – of two months – has been completely eliminated. Pexgol's pipes have never failed or clogged.



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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.

