Drainage lines in underground mine Case Study | N°73





Installation of 3000 meters of PE-X pipe for an underground mine.

Lundin Mining - Candelaria Norte MineChile | 2020

Working Conditions:

Underground work

Pexgol Pipes:

Pexgol 160 mm (6"), class 19

Application:

Dewatering

Length:

3000 m

The Challenge

Lundin Mining at Calendaria Norte Mine had to install a drainage line for its underground mine, where the main challenge was to pass it through the main ramp of the mine, which is only available once a month during its maintenance (since the operation of the mine cannot be stopped).

Pexgol Solution

The client decided to install 3,000 meters of Pexgol pipe that was supplied in five coils of 600 meters each. Two main maintenances were scheduled, where three coils per day (1800 meters) were unrolled and installed.

Cross-linked polyethylene was chosen because of:

- Its long-length supply format.
- Ease of installation, thanks to the flexibility of the pipe that was easy to accommodate in the curves of the interior of the mine.
- Limited installation times to avoid stopping the mining operation.

Installation was quick and easy, uncoiling the full length of the pipeline and then dragging it into the mine.



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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 nonstop

performance in some of the world's harshest environments.

• Long pipe sections:

Pexgol pipes can be supplied in long coil lengths, reducing number of joints, installation time and risks.

• Creep and impact resistance:

Crosslinked Pexgol pipes can withstand high amounts of axial and radial stresses and are highly resistant to impact, fracture and fatigue. Furthermore, Pexgol pipes are completely resistant to cracks even when dragged over sharp rocky terrain and coagulated salt crystals.



