Vertical drain in underground mine Case Study | N°67





Installation of Pexgol pipes for drainage of an underground mine

Meridian Mine -Faena El Peñón Chile | 2018

Working Conditions:

Underground work

Pexgol Pipes:

Pexgol 160 mm (6"), Class 15 Pexgol 160 mm (6"), Class 19 Pexgol 200 mm (8"), Class 26.7

Application:

Mine Dewatering

Length:

800 m

The Challenge

The Meridian mine (Faena El Peñón) required the installation of a line for the drainage of high-pressure water from the lower level of the mine, passing through the vertical ventilation chimney with a height of 150 meters, continuing through the interior of the mine until an outdoor pool.

Pexgol Solution

The client decided to install 800 m of Pexgol pipes in three different sizes: Pexgol 160 mm (6") Class 15, 160 mm (6") Class 19 and 200 mm (8") Class 26.7.

The installation was very simple:

- Lifting was carried out in the ventilation chimney.
- Mechanical connections were used that did not require special tools for installation.
- In the upper area the pipes were placed on supports provided by the mining company.

Pexgol was selected due to its capabilities:

- Possibility of supply in long lengths minimizing the connections to only 4.
- Ability to withstand the drag of more than 5 km from outside to the final assembly point inside the underground mine.
- Ability to withstand creep involved in vertical mounting of 150 meters.



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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.



