



Installation of a Pexgol line 200 meters deep at an underground mine

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**Meridian Mine -
Faena El Peñón**
Chile | 2018
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The Challenge

The Meridian Mine (Faena El Peñón) required the installation of a line for the transport of compressed air from the surface (horizontal), crossing roads of mining vehicles, ending 200 meters deep inside an underground mine through a vertical chimney.

The line had to withstand 10 bar of pressure.

Working Conditions:

Pressure: 10 bar

Pexgol Pipe:

Pexgol 160 mm (6"), Class 15

Application:

Transport of compressed air

Length:

1800 m

Pexgol Solution

The client decided to install a 160 mm (6") Pexgol pipe class 15 SDR 11 of 1800 meters in coils of 600 meters each.

Pexgol pipe was selected due to its advantages:

- Less joints were needed, contributing to saving costs and giving more reliability to the line.
- Resistance to mechanical stresses involved in installing at mining cross-roads, using a 1.5 meter ditch and filling with material from the same ditch, without using a steel jacket.
- Resistance to changes in ambient temperature (5°C to 30°C).
- Creep resistance.

The installation was simple: only 4 mechanical connections were used, selected by the mining company without using special tools. If HDPE pipes



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were used, about 150 mechanical connections would have been required.

Also, to support the Pexgol pipes in the upper zone, before entering the underground mine by the chimney, a mechanical system designed by the mining company was incorporated.

Air compressor system



Compressor output connection



Ventilation chimney entry



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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.

Mining Road Crossing

