

# Pexgol Ensures Reliable Operation in High-Demand Hydraulic Systems



Flexible installation, fast deployment and long service life for a mining project with over 300 m of elevation difference.



## Endeavour Silver Mexico | 2024

### • Working Conditions

Temperature: Ambient (pipeline exposed to direct sunlight)  
Flow Rates:  
1.4 m<sup>3</sup>/h – Tailings (6" SDR 7.3)  
107 m<sup>3</sup>/h – Recovered water (8" SDR 4.5)  
5.5 m<sup>3</sup>/h – Concentrate (50 mm SDR 11)

Pressure:  
24 bar static pressure – Tailings line  
32.3 bar – Recovered water line  
Free discharge – Remaining lines

### • Pexgol Pipe

Pexgol 2", 3", 4", 6" y 8"

### • Application

- Tailings (50% solids)
- Concentrate
- Recovered water (ascending pumped line)
- Raw water
- Potable water
- Fire protection system water

### • Length

4 lines of 2,400 m each  
1 line of 3,300 m

## The Challenge

Endeavour Silver's Terronera Mine required the design and implementation of a completely new hydraulic system, as no existing infrastructure was available on site. The project involved transporting fluids over an elevation difference exceeding 300 meters, generating high velocities and varying pressure levels along the route. These demanding hydraulic conditions posed significant operational risks, including:

- Increased abrasion and wear
- Vibrations within the piping system
- Higher probability of premature failures
- Construction challenges across steep slopes and uneven terrain

Additionally, the recovered water line operated in an ascending configuration using pumping systems, while the remaining lines functioned by gravity. This required a versatile piping solution capable of adapting to different operating regimes while maintaining long-term reliability.

## The Solution

To meet the project's technical requirements, a Pexgol piping system was selected due to its unique combination of mechanical strength, hydraulic efficiency, and installation flexibility. The solution successfully addressed the complex routing conditions and demanding operating parameters.

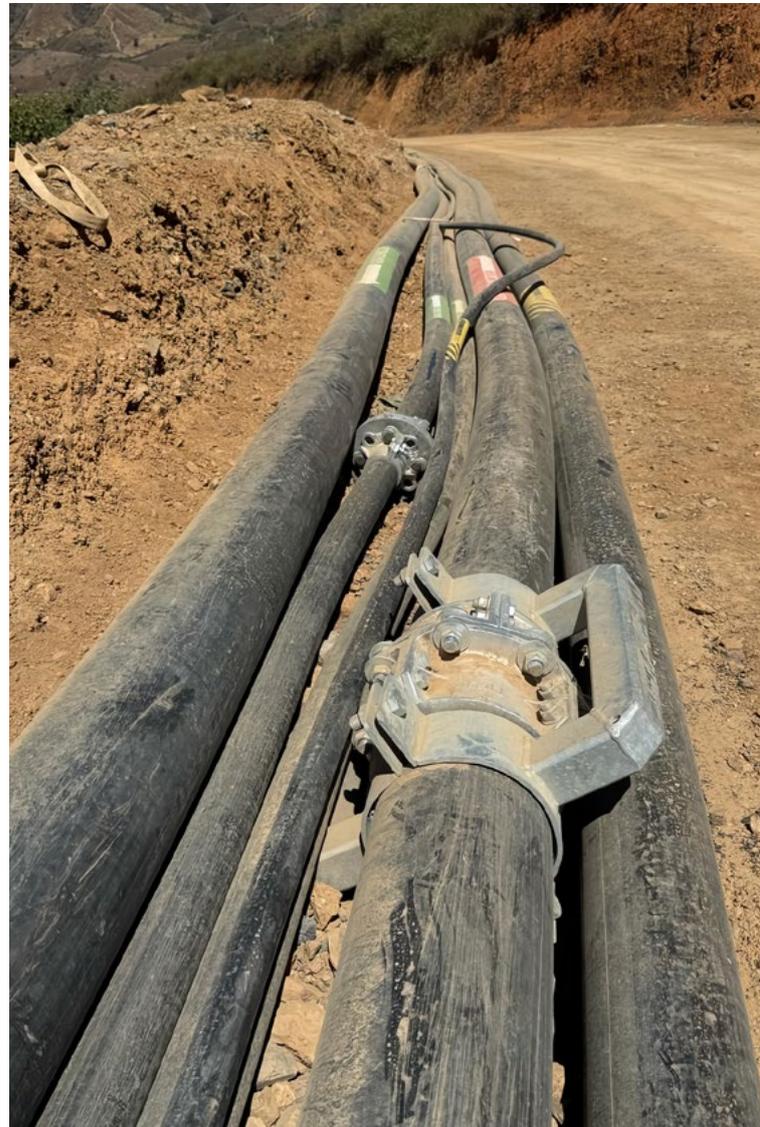
Key Advantages of the Pexgol System:

- Fast installation, reducing construction time
- Flexible and lightweight pipes, ideal for complex topography
- Supplied in long coils, minimizing joints and potential failure points
- Excellent abrasion resistance for tailings and concentrate transport
- High pressure resistance for static pressures exceeding 30 bar
- UV resistance for exposed installations
- Long service life in demanding mining environments

During execution, design modifications were required as the project progressed into more challenging construction stages. The inherent flexibility of the Pexgol system, combined with technical support from the engineering team, allowed efficient adaptation to new field conditions.

Results Achieved:

- Continuity of installation activities
- Reduced construction risks
- Optimal compatibility between material performance and real operating conditions
- Compliance with performance, safety and reliability criteria



# The Advantages of Pexgol Pipe Systems



## 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.



## 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.



## Excellent chemical and corrosion resistance

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



## Long pipe sections

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



## High temperature resistance

Working temperatures can range from  $-50^{\circ}\text{C}$  /  $-58^{\circ}\text{F}$  up to  $110^{\circ}\text{C}$  /  $230^{\circ}\text{F}$ .



## Creep and impact resistance

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.

For more information please visit:  
[pexgol.com](http://pexgol.com)

