

Environmental protection and efficiency in tailings management

In an engineering challenge, the Pexgol 225 mm (8") Class 15 pipe proved to be the perfect solution for transporting tailings at the Mina Capela mining complex.



Mina Capella - Grupo Peñoles Mexico | 2023

• Working Conditions

Flow: 200 m³/h
Temperature: 25°C / 77°F
Pressure: 130psi
Fluid components: Limestone, water and acids - 55% solids in suspension.
Specific weight 3.
K₅₀ (microns): 91.3

• Pexgol Pipe

Pexgol 225 mm (8"), Class 15

• Application

Transport of slurry

• Length

900 m / 2952 ft

The Challenge

At the Mina Capela mining complex of Grupo Peñoles in Mexico, they faced the challenge of implementing an efficient and safe solution for pumping tailings from the thickener plant to a new tailings dam. The solution had to be wear-resistant in the long term and ensure minimal risk of leaks to protect the environment.

The Solution

The choice was to install 900 meters of Pexgol 225 mm (8") Class 15 piping, known for its durability and abrasion resistance. The piping was arranged around the tailings dam, with branches every 200 meters to fill the dam from different positions, thus optimizing the distribution of material.

The main challenges to face were:

- Highly abrasive fluid: The tailings required a solution that could withstand long-term wear.
- Environmental protection: In case of spillage, the fluid could negatively affect the local ecosystem.

Therefore, an option with minimal risk of leaks in the piping and connections was sought.

The Pexgol 225 mm (8") Class 15 piping proved to be the ideal solution for this challenge. The combination of the material's (PE-X) abrasion resistance and the supply in rolls, which minimizes the number of joints, made Pexgol the safest option. After three years of operation, thickness measurements taken every six months have confirmed that there has been no reduction in the thickness of the piping, demonstrating its durability and optimal performance.



Shot on OnePlus × Hasselblad



Shot on



Shot

The Advantages of Pexgol Pipe Systems

PEXGOL
X-LINKED PIPING SOLUTIONS



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°C/-58°F up to 110°C/230°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

