

Switch to Pexgol Reduces Downtime in Molybdenum Concentrate Transport



Pexgol's resistance to scaling and chemicals delivers consistent operation in open-pit mining.



Buena Vista del Cobre Mexico | 2024

• Working Conditions

Temperature: Ambient (Design temp. 40°C)
Pressure: 160–180 psi
Flow Rate: 335 m³/hr
Fluid Composition: Molybdenite (MoS₂) in copper-molybdenum concentrate, with Mo, Cu, Fe, S, and Si

• Pexgol Pipe

Pexgol 8" SDR 11

• Application

Molybdenum concentrate flotation

• Length

100 m / 328 ft

The Challenge

At the Buena Vista del Cobre open-pit mine in Sonora, Mexico, molybdenum concentrate was transported through an HDPE pipeline. This system was regularly compromised by the highly scaling nature of the fluid, which consisted primarily of molybdenite (MoS₂) in a copper-molybdenum concentrate containing Mo, Cu, Fe, S, and Si.

The HDPE pipelines required daily manual intervention to prevent blockages, including frequent hammering along the line to maintain flow. Additionally, sections of the pipe had to be replaced at least once a month due to severe scaling buildup—resulting in high maintenance costs, operational delays, and recurring shutdowns.

The Solution

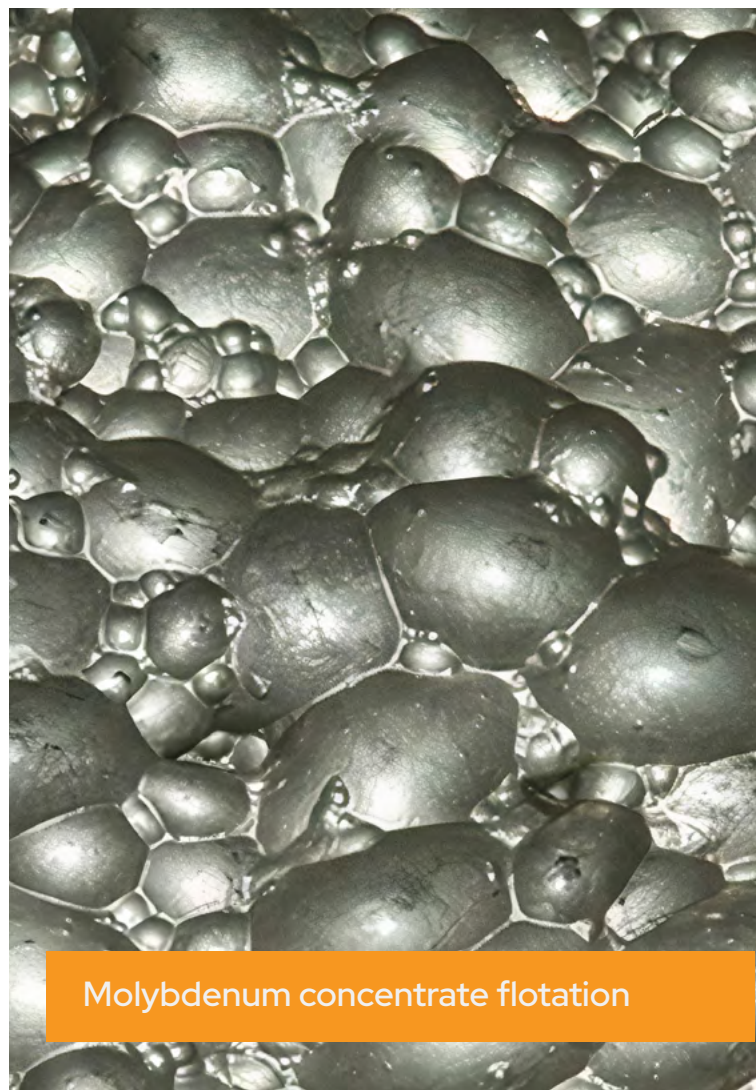
In 2024, the mine replaced 100 meters of 8" SDR 11 HDPE pipe with Pexgol pipe for its molybdenum concentrate flotation line. Pexgol was selected for its exceptional chemical and corrosion resistance, and especially its superior performance against scaling—a crucial feature given the aggressive nature of the transported slurry and the system's operating conditions (160–180 psi pressure and temperatures up to 40°C).

The installation was fast and simple, requiring no specialized equipment. The Pexgol coil was unrolled using an excavator and front loader, and the pipe was laid in place within hours. Only electrofusion couplings (EF) were used, further simplifying the process.

Results: After one year of continuous operation, the client reported zero blockages and no maintenance required on the Pexgol line. This has eliminated the need for frequent replacements and cleaning, drastically reducing operational costs and ensuring uninterrupted flotation processes that meet Grupo México's high efficiency standards.



BUENAVISTA DEL COBRE



Molybdenum concentrate flotation

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°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

