



Dewatering with low pH levels

.....

Arcelor Mittal Mine Mexico | 2016

.....

Working conditions:

Pressure 400 Psi; height difference:
220 m; specific weight 1.15 t/m³;
solids 15-20%

Pipes used:

Pexgol 8" (225 mm)

Application:

Dewatering

Length:

Sections of 280 m

The Challenge

Arcelor Mittal required to dewater their open cast mine, due to the contamination produced by the low pH levels of the water. The open cast was 220 meters depth with an 80° slope. From the client point of view, installing a regular pipe would involve doing more than 22 joints, on a harsh ground that was also dangerous for the people that work there. In addition, a regular pipe might need to be supported every 12 meters so it will not collapse due to its own weight.

The Solution

Pexgol pipes were the optimal solution for this project, because it can be supplied in long lengths coils that makes the whole installation easier. Pexgol is also known for its stress resistance, Pexgol's crosslinking piping solution can withstand high amounts of axial and radial stresses, it only stretches up to 2% of its own length and it is capable to hold its own weight plus the water column. Due to its great flexibility, the coil was uncoiled hundreds of meters away from the installation place, and it was dragged after to the right spot. In order to descend the pipe through the open cast, it required only chains and a backhoe to hold it. Arcelor Mittal was very satisfied with the installation process, which was simple, and from their point of view, impossible to do it with other type of pipe.



Dewatering with low pH levels

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 $-50^{\circ}\text{C}/-58^{\circ}\text{F}$ up to $110^{\circ}\text{C}/230^{\circ}\text{F}$.
- **Superb internal and external corrosion resistance:**
Our pipes are proven to withstand decades of exposure to corrosive environments, with non-stop performance in some of the world's harshest environments.
- **Low weight:**
Compared to steel or rubber, Pexgol's solution results in reduced transportation, storage and labor costs due to lower weight per meter.
- **Long pipe sections:**
Pexgol's pipes can be supplied in long lengths coils, reducing number of joints, installation time and risk.
- **Creep and impact resistance:**
Pexgol's crosslinking piping solution can withstand high amounts of axial and radial stresses and are highly resistant to impact, fracture and fatigue. Our pipes are also completely resistant to cracks – even when dragged over sharp rocky terrain and coagulated salt crystals.

