Well drainage at mining dam Case Study | N°78





Installation of a drainage system between a well and a mining dam.

CODELCO -El Teniente Mine Chile | 2019

Working Conditions:

Extreme temperatures -5° to 35°C / 25° to 95°F

Pexgol Pipes:

Pexgol 250 mm (10"), class 15

Application:

Dewatering

Length:

1620 m / 5314 ft

The Challenge

The administration of the Carén reservoir, in the commune of Alhué (Chile), receives tailings from the El Teniente mine.

The western retaining wall of the reservoir needed to be widened by at least 30 meters. In order to do that a well had to be drained that was formed by leaks from the wall at its base. The extracted water had to be returned to the dam.

Also, the drainage work had to be done in just 20 days.

Pexgol Solution

The customer finally opted for Pexgol, despite the higher cost per meter, because the final cost of the installation, that only took one week, was widely offset against the installation of HDPE pipe that would have taken about a month and a half.

The advantage of Pexgol, in this solution, lies in the supply format in coils of long lengths, which made it possible to streamline its layout in the field, with no more than a dozen couplings, thus reducing assembly time. In addition to the quick installation, technical assistance from the local team (Crosspipe Systems) was carried out with great agility and efficiency. A total of 11 electrofusion fittings were installed.

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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.



