Water transport between dams Case Study | N°77





Installation of a drainage system between dams in a copper mine.

CODELCO - El Teniente MineChile | 2019

Working Conditions:

Extreme temperatures -10° to 40°C / 14° to 104°F

Pexgol Pipes:

Pexgol 160 mm (6"), class 15

Application:

Dewatering

Length:

5600 m / 18372.7 ft

The Challenge

Cooperación del Cobre de Chile (CODELCO) required transporting water from the Barahona dam to a specific sector of the Caletones smelter, located south of the dam. The line was due to be installed in less than 10 weeks.

The distance of the route, in addition to other works being carried out on site and the vehicular flow, made it critical that the pipeline needed to be installed in the shortest time possible.

Pexgol Solution

The client made an economic evaluation, considering the installation time of the HDPE versus PE-X pipes from Pexgol. Pexgol was finally chosen.

The delivery format in coil of long lengths, allowed the totality of meters to be delivered in only 10 coils.

Installation was exceptionally fast. The uncoiling allowed up to 6 drums per day to be released, the sections to be located in their final location and subsequently joined with the relevant couplings, within 6 days. As for the accessories, 9 electrofusion couplings were used. The final experience was very satisfying.



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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.



