### Case Study #116

# Replacement of metal pipe with PE-X for formation water



Installation of a Pexgol line for the transport of formation water in an oil company.



Ecuador | 2022

### • Working Conditions Pressure: 25 psi Temperature: 71°C / 160°F

• Pexgol Pipe Pexgol 225 (8"), Class 24

Application
Formation water transpo

# • Length 160 m / 525 ft

# The Challenge

Enap Sipetrol Ecuador, is a branch of the Chilean state oil company Enap. At their plant, they needed to transport formation water with 65,000-70,000 ppm of sodium chloride, which also had high salinity. This formation water has its origin at the outlet of a three-phase separator, up to a water storage tank. The existing metal pipes in the local market that are used for these processes corrode quickly and present leaks along the way. This situation made it necessary to apply chemical treatment to the pipes, with the cost that this represented, and even so, the treatment did not guarantee the integrity of the pipe.

# **The Solution**

It was decided to use Pexgol pipe due to the working conditions that it can withstand for these applications and that also has a longer lifespan than the metal pipes usually installed, after the tests carried out, it was satisfactorily observed that it has not been any inconvenience, there are no leaks, no presence of corrosion and no solids adhered.

The installation of the 160 m of 225 mm diameter pipe was carried out with the collaboration of 12 people due to its dimensions and weight, in addition, locally manufactured "cradle" type supports were placed. For the assembly of the pipe, a horizontal unwinding machine was used, a crane truck, mobile roller stations for displacement, mechanical keys, torque meter and manual tools, 4 flanged couplings were installed for the terminations with their respective fixing clamps since that line it was installed in 2 sections.





# 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.



**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.

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### 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.