

Comprehensive Water Transportation Solution for Urgent Projects



How Pexgol Accelerated the Supply and Installation of a Critical Line.



Madagascar Mining Madagascar | 2024

• Working Conditions

Temperature: 25°C / 77°F
Flow Rate: 300 m³/h
Pressure: 28 bar
Fluid Components: Sand

• Pexgol Pipe

Pexgol 280 mm (10") class 30, 24, 19 & 15

• Application

River Water Transportation

• Length

6 km

The Challenge

A leading mining operation focused on nickel and cobalt extraction and refining in Madagascar, faced a critical challenge: ensuring a reliable water supply to its pulp plant. This required building a 6-kilometer pipeline from the nearest river to the plant. Although the project design seemed straightforward, two key challenges emerged:

1. **High Pressure Requirements:** With a height difference of 160 meters and friction losses across the 6-kilometer distance, the pipeline needed to withstand pressures of up to 28 bar.
2. **Project Urgency:** The plant was running out of water, meaning the project had to be executed quickly – from pipe supply to installation – with limited resources.

The Solution

Pexgol provided an ideal solution for this project by supplying 280 mm (10") pipes in classes 30, 24, 19, and 15. These pipes were selected due to their ability to handle high pressures, flexibility, and ease of installation. Additionally, they were supplied in long coils of 100, 200, and 300 meters, which significantly reduced the number of required connections.

The fitting system used included electrofusion couplings, flared ends, and loose flanges, ensuring secure and quick connections. Pexgol's technical support covered the entire process, from design to on-site installation, including training and tools to optimize the project's execution.

Ambatovy evaluated alternative solutions such as steel flexible pipes with PE coatings but ruled them out due to long delivery times and the need for specialized installation tools. **Pexgol proved to be the most efficient and viable solution**, providing a fast, tailored response to the client's needs.

Pexgol's performance in this project highlights its ability to overcome technical and logistical challenges in demanding conditions.



[Watch Installation Video](#)



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

