Case Study #125

Implementation of Pexgol pipelines for the transport of muddy water

Adapting to the demands of the process: how Pexgol solves the problems of corrosion and abrasion in the extraction of palm oil.

IACSA
Colombia | 2023

- **Working Conditions**
  Temperature: 90°C to 100°C / 194°F to 212°F
  Flow rate: 40 m³/h

- **Pexgol Pipe**
  Pexgol 90 mm (3"), class 15

- **Application**
  Muddy water transport

- **Length**
  100 m / 328 ft

The Challenge

Industrial Aceitera De Casanare S.A. is a leading company in palm oil extraction in the Casanare region, Colombia. In their production process, the company faced a significant challenge: replacing several sections of the line leading from the plant to the oxidation lagoons due to the high wear and corrosion of the existing piping.

The piping in question transported muddy water (POME), with a high organic load and temperatures between 90ºC and 100ºC. The flow rate was 40 m3/h, which represented a significant challenge for the durability of conventional piping. Industrial Aceitera De Casanare needed a solution that would guarantee the efficiency and continuity of its operations, reducing maintenance costs and downtime.

The Solution

The company decided to implement Pexgol piping, known for its high resistance and success in the palm oil industry. Pexgol is especially resistant to high temperatures, corrosion, and abrasion, making it the ideal solution for Industrial Aceitera De Casanare's specific needs.

They used 100 meters of 90mm Class 15 Pexgol piping to replace the affected sections of piping. Adopting Pexgol allowed the company to reduce plant shutdowns, costs, and maintenance time, resulting in increased efficiency and profitability.

The installation of 100 meters of piping was done in sections to progressively replace the worn-out piping. Twelve GP mechanical couplings were used.

The ultimate goal of this pilot project is to demonstrate the viability of investing in Pexgol piping, allowing Industrial Aceitera De Casanare to expand its use to other lines in its infrastructure. The successful implementation of Pexgol in this case study is a testament to the quality, durability, and efficiency that this product offers to the palm oil industry.

PEXGOL
X-LINKED PIPING SOLUTIONS

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