



Transportation of alcohol for the production of rum and brandy

Case Study | N°54



Transport of concentrated alcohol to 86% for the production of rum and brandy

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Cuba Ron
Cuba | 2016
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Working Conditions:
86% alcohol concentration, pressure 3 bar,
temperature 85°C / 185°F (distillery area)

Pexgol Pipes:
Pexgol 32, 63, 100 & 160 mm, Class 15

Application:
Transportation of concentrated alcohol,
rum and brandy

Length:
1500 m

The Challenge

Cuba Ron is the largest producer of rum in Cuba and manufacturer of brands such as Havana Club and Santiago de Cuba.

Cuba Ron needed to transport the rum and brandy between the different areas of the plant and to the cellars. For this application they used stainless steel and carbon steel pipes. Due to the corrosion of the alcohol, they were in very bad condition and it was dangerous for the transport of the fluid which was dangerous for the fluid transport. Also, these lines suffered from corrosion on the outside of the pipes as the plant is located in a tropical area near the sea, making the environment corrosive helping the deterioration of the lines.

Pexgol Solution

Cuba Ron then looked for a long-term solution for the replacement of their steel pipes. The main concern when selecting a new pipe material was not affecting the flavor of the rum and brandy that they commercialized worldwide, and to find a pipe material that could withstand the difficult transport conditions for the line.

Therefore, they performed different chemical and taste tests before making the change. They performed tests on PE, ETFE and both suffered a chemical attack. When testing PE-X the tube reacted positively * for both chemical resistance and taste.



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Given the excellent results, on-site tests were also carried out with a long-term pipeline.

The installation was quick and without complications despite the fact that the plant, being located in Cuba, did not have sophisticated equipment or certified personnel. Pexgol supplied pipes in long sections and mechanical accessories that were very easy to install and did not require any special tools.

The installation helped improve the production of the plant and prompted the client to renew all its lines with Pexgol pipe systems.



(*) The tests were carried out in the laboratories of Golan Plastic Products.

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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's pipes can be supplied in long lengths coils, reducing number of joints, installation time and risks.
- **Creep and impact resistance:**
Pexgol's crosslinking piping solution can withstand high amounts of axial and radial stresses and is highly resistant to impact, fracture and fatigue. Also is completely resistant to cracks even when dragged over sharp rocky terrain and coagulated salt crystals.

