



Replacement of carbon steel pipes with Pexgol for the transportation of natural gas.

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YPF

Argentina | 2022
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Working Conditions:

Fluid: Condensate natural gas
Temperature: 35°C / 95°F
Minimum Pressure: negative (vacuum)
Maximum Pressure: 2 kg/cm²
Flow: 40.000 standard m³/d

Pexgol Pipe:

Pexgol 160 mm (6") , class 10

Application:

Natural gas transportation

Length:

600 m / 1968 ft

The Challenge

YPF is an Argentine energy company dedicated to the exploration, exploitation, distillation, distribution and production of electricity, gas, oil and other products related to the industry.

In its Vacas Muertas oil field, province of Mendoza (Argentina), the company had to replace 600 meters of carbon steel pipe, located between the crude oil treatment plant (PTC) and the gas compression plant. Over time, the section had reduced its internal diameter at different points of the trace, due to encrustations caused by corrosion and deposits resulting from humid gas condensation. This reduced the gas flow, and there was a risk of reaching a total obstruction of the flow.

As it is a continuous process, which does not allow accumulation of gas, it was necessary to carry out the work as quickly as possible with the shortest time of interruption of the flow to the gas plant.

Pexgol Solution

It was decided to install Pexgol pipes, which allow a quick installation and with the minimum amount of resources. This way, the corrosion process will be avoided, as well as the accumulation of scale due to the low absolute roughness of the internal walls of Pexgol pipes, allowing a continuous flow without obstructions over time.

The installation was completed with 3 coil of Pexgol 160 mm Class 10





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pipe, the joints were made with electrofusion couplings, and the steel transitions with Pexgol flarings (stub-ends). The installation was carried out in two working days, aerially on existing trestles, and with a minimum interruption of the process. The resources used were minimal: 3 operators with an uncoiler, a hydrocrane and a backhoe. The replacement with carbon steel would have taken a month with the company's operational resources, and with a total cost 6 times higher than that required for the materials and installation with Pexgol pipes.





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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.



Embedded Carbon Steel Pipe

