



Replacement of steel pipes with Pexgol for testing centrifugal pumps.

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Flowserve

Argentina | 2022
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Working Conditions:

Flow: 7 kg/cm²
Temperature: 55°C / 131°F

Pexgol Pipe:

Pexgol 250 mm, class 12 + Tee fittings
& flanged electrofusion elbow

Application:

Centrifugal pump testing

Length:

36 m / 118 ft

The Challenge

Flowserve is an American multinational corporation and one of the largest providers of industrial and environmental machinery such as pumps, valves, mechanical end seals, automation, and services to the power, oil, gas, chemical, and other industries.

To carry out tests on centrifugal pumps in the laboratory, the company used 10-inch carbon steel pipes. As the design is different in each case, the assembly and disassembly of very heavy pipes were periodically required with the risk that this implies. It was also necessary to use chemical products to prevent corrosion of the pipe.

Pexgol Solution

The client decided to replace its carbon steel pipes with Pexgol. Since they are 6 times lighter than carbon steel pipes. Therefore, they allowed to reduce the assembly and disassembly times, with less personnel and lower risks of accidents for the operators. On the other hand, the problem of corrosion that attacked the steel pipes was completely ruled out.

The joints used at the ends of the pipes were flanged mechanical couplings. In addition, Tee fittings and flanged Pexgol elbows were used.





Pexgol for centrifugal pump test

Case Study | N°107

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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 $-50^{\circ}\text{C}/-58^{\circ}\text{F}$ up to $110^{\circ}\text{C}/230^{\circ}\text{F}$.
- **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.

