



Transportation of Phosphoric acid in a potassium nitrate plant

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Haifa Chemicals
 Israel | 1995

Working conditions:

Phosphoric acid up to 85%.
 The maximum working condition is 6 bar and 80°C

Pipes used:

Pexgol 1/2" (16 mm) up to 14" (355 mm)

Application:

Phosphoric acid

Length:

1000 meters

The Challenge

Corrosion in the pipes and leakages in the connections. Frequent replacement needed. Fiberglass and Rubber lined steel pipes are hard to maintain.

Pipe materials tried prior to Pexgol:

- Rubber lined steel pipes in short sections
- Fiberglass pipes

The Solution

Haifa Chemicals use Pexgol (PEX) pipes very successfully, since 1995 in all their process.

Diameter of 1/2" (16 mm) up to 14" (355 mm)

Pexgol pipes are used in the Phosphoric acid plant, in the potassium nitrate plant and in the waste treatment plant. Pexgol pipes work with Phosphoric acid up to 85%, The maximum working condition is 6 bar and 80 degrees Celsius.

The Economic

The original mean time between failures (MTBF) was short due to frequent leakages. Changing to Pexgol eliminated failures completely. No maintenance required.



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Advantages

- **Durability:**
Pexgol Survives the tough handling typical of working conditions that involve dragging, bending, cuts and drops.
- **Excellent chemical, corrosion and temperature resistance:**
Excellent resistance to the combined effects of mixtures of salt crystals and water plus high working temperatures.
- **Superb internal and external corrosion resistance:**
Proven to withstand decades of exposure to corrosive environments, with perfect performance in some of the world's harshest environments, such as the Dead Sea.
- **High resistance to wear:**
Pexgol is a preferred solution for transportation of abrasive materials.
- **Low weight:**
Compared to steel or rubber, resulting in reduced transportation, storage and labor costs due to lower weight per meter.
- **Creep and impact resistance:**
Pexgol pipes withstand combinations of axial and radial stresses due to cross-linking. Also highly resistant to impact, fracture and fatigue, making Pexgol completely resistant to cracks, even when dragged over sharp and rocky terrain and sharp coagulated salt crystals.

