Case Study #148

Syncrude & Pexgol: A Collaboration Set to Reshape Slurry Transport

Bridging the Gap between Durability and Functionality in Harsh Processing Environments.

Syncrude
Canada | 2022

- **Working Conditions**
  Temperature: 82°C / 179°F
  Pressure: 50 psi
  Components of the fluid: Water, sand, bitumen, high oxygen content
- **Pipe**
  Pexgol 280 mm, class 15
- **Application**
  Transport of high temperature slurry
- **Length**
  10 m / 32 ft

The Challenge

Syncrude Canada Ltd, a leader in the synthetic crude oil industry, faces a unique challenge in its production process. The extraction of raw oil called bitumen from oil sands is an intensive operation involving the transport of high-temperature slurry, which comprises water, sand, bitumen, and high oxygen content. Their existing pipeline, made from Schedule 80 carbon steel, was proving insufficient. This line was failing prematurely – in as little as 6 months, especially in high wear areas such as elbows and horizontal runs. The principal culprits were the the combination of the erosion and the corrosion from the high oxygen content that created the unique conditions accelerating the failure time for the carbon steel.

The Solution

Pexgol, renowned for its high-grade PE-X piping systems, introduced its 280 mm, class 15 pipe to serve Syncrude's rigorous requirements. The 10-meter pipeline was strategically designed to transport the high-temperature slurry under conditions of 82°C (179.6°F) and a pressure of 50 psi. The benefits of the Pexgol piping system - fast installation, high resistance to chemicals & corrosion, and exceptional durability - emerged as game-changers. With the added advantage of GP Flange Couplers and Pexgol Elbow fittings, the solution not only outlasted its carbon steel predecessor but also ensured a smoother, more efficient production process.

pexgol
X-LINKED PIPING SOLUTIONS

The Advantages of Pexgol Pipe Systems

PEXGOL
X-LINKED PIPING SOLUTIONS

High wear resistance
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 endure a wide range of chemical agents, slurries, toxic and radioactive materials.

High temperature resistance
Working temperatures range from -50°C/-58°F up to 110°C/230°F.

Superior external corrosion resistance
Pexgol withstands 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
Pexgol pipes tolerate abnormal 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