

Case Study: GYLON EPIX® Style 3504 Oil & Gas Refinery Storage Tanks



INDUSTRY

Oil & Gas - Refinery

BACKGROUND

The customer, a global oil and gas producer, needed to seal an old, 1930s-era oval flange in one of their storage tanks. These nonstandard flanges are difficult and costly to machine and replace. Finding a trusted sealing solution was imperative. The refinery initially tried a compressed fiber sheet material to seal the imperfect flange, but soon experienced leaks.

CHALLENGES FACED

The media being sealed was Butane at 65 psi and ambient temperatures, using A193 B7 studs. Butane is an EPA-regulated, volatile organic compound (VOC), and leaks on a ppm level are unacceptable. The severe pitting on the tank's flange face was the biggest hurdle and created challenges in achieving a perfect seal.

Replacing or repairing the flange proved to be too costly and would take the tank offline, disrupting operations. Finding a gasket suited for the less-than-ideal flange conditions was the best path forward for the plant.

OPERATING CONDITIONS

Size: 22.5" x 34.5" obround

Temperature: Ambient

Application: Flat face flange - tank nozzle

Media: Butane

Pressure: 65 psi

SOLUTION AND BENEFITS

The customer worked with Garlock's engineering team to install GYLON EPIX® Style 3504, a high-performance PTFE gasket. Application torque values were provided that resulted in 3600 psi gasket stress. The gasket has been in service without leaks for more than a year, highlighting the ability of GYLON EPIX® to conform to imperfect flange surfaces thanks to a patented raised hexagonal surface profile. GYLON EPIX® helps ensure safety and compliance while saving the oil and gas producer time and money.

For more information, please visit:

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