

# CASE STUDY: DeltaV-Seal™ withstands cryogenic temperature fluctuations



## MATERIAL:

Stainless Steel, 316L

## INDUSTRY:

Oil & Gas

## CUSTOMER:

Progas Norge AS  
(Formerly Primagaz)

## INDUSTRY CHALLENGES

Liquid Petroleum Gas (LPG) distribution centers have the unique challenge of storing and transporting cryogenic fluid, which causes extreme temperature fluctuations within piping, flanges and seals. When using traditional gaskets, this change in temperature produces different rates of expansion and contraction of the seals and joints, leading to joint failure.

## BACKGROUND

The customer is the oldest propane sales and distribution company in Norway. Their supply hub carries out both critical reserve and distribution operations using LPG acquired from the nearby refinery. Once it arrives at the customer's facility, the reserve LPG is distributed via mobile tankers to supply fuel stations throughout the country. The customer has used traditional gaskets for years, and while they initially hold a seal, over time they need re-tightening and eventually they degrade and cause leakage.

## OPERATIONAL CONDITIONS

PRESSURE: PN10 - 40	ATMOSPHERIC CONDITIONS: Ambient indoor
TEMPERATURE: -180 °C	MEDIA (PRODUCT): LPG
SIZE: DN25 - DN250	MEDIA (CLEANING): N/A

## SOLUTIONS

Pipeotech suggested DeltaV-Seal to solve the leakages caused by traditional gaskets. As DeltaV-Seal is a solid, one-piece metal gasket, in the most compatible material to the flange, leaks due to temperature fluctuations are mitigated as the flange and gasket form a seal that withstands the rigors of cryogenic service and stays exceptionally tight over time.

## BENEFITS

After installation of their first DeltaV-Seal, the customer has reported zero leakages on their LPG systems. This has resulted in a greatly reduced maintenance schedule, increased profits and a safer work environment. The customer further stated that based on the projected lifespan of the existing plant and of the DeltaV-Seal, they have no plans to change the gaskets again for the duration of operations at their facility.

**PIPEOTECH**

[www.pipeotech.com](http://www.pipeotech.com)

+47 371 63 000

[hello@pipeotech.com](mailto:hello@pipeotech.com)