

# CASE STUDY: A seal for an array of applications



MATERIAL:  
Stainless steel, 316L

INDUSTRY:  
Pharmaceutical

CUSTOMER:  
GE Healthcare  
Lindesnes

## INDUSTRY CHALLENGES

Pharmaceutical process factories that produce x-ray contrast agent deal with a range of applications including everything from water to solvents, bases, acids and gases, each having very different physical properties that require unique solutions. In order to make the systems more efficient, new gaskets that need less service and replacement are required, along with a durable seal that eliminates environmental hazards.

## BACKGROUND

The customer is a state-of-the-art pharmaceutical process factory that produces x-ray contrast agent. The facility has approximately 230 km of pipework with around 40,000 valves, 2,000 pumps and 700 heat exchangers. This massive network of piping, lends to many joints that when they degrade, are an expensive fix. The customer was using graphite spiral wound gaskets that were not only difficult to take apart during service but also often required machining of the flange surface. This caused long and costly repairs.

## OPERATIONAL CONDITIONS

PRESSURE: PN10-40 bar	ATMOSPHERIC CONDITIONS: Ambient Inside
TEMPERATURE: Ambient to 120°C	MEDIA (PRODUCT): Various
SIZE: DN15-100	MEDIA (CLEANING): Steam

## SOLUTIONS

The DeltaV-Seal™ was suggested to be used in the customer's steam, lye, nitrogen and methane pipe runs, and as a part of the cool water system. To determine if the DeltaV-Seal was appropriate for the facility's needs, the customer exposed it to corrosive saline solutions, and found that the DeltaV-Seal was durable and had no signs of corrosion. Pipeotech worked with the customer to optimize the design: one of the three grooves on the gasket did not hit the gasket surface of the flange collar, and so Pipeotech created a new design that would correctly seal the rings against the flange collar. This custom design gave the customer a custom seal.

## BENEFITS

On the different runs DeltaV-Seal is used throughout the facility, no leaks have been detected. No leaks mean less maintenance and replacement of seals, and no harmful emissions, like methane, escaping, helping the customer reach its goal to be environmentally responsible.

**PIPEOTECH**

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

+47 371 63 000

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