



Case Study: Refinery

Flare Gas Recovery Unit - EVOLUTION®

PROBLEM

On a Flare Gas Recovery Unit, there are Carbon Steel flanges being bolted to A2205 Duplex Stainless-Steel flanges on the flare gas piping. As a result of the dissimilar metal, galvanic corrosion will occur unless a flange isolation kit is used. Due to the nature of the flare gas line, it is difficult to predict exactly what will be going through the line, as it can be a combination of any vapor within the refinery. This makes chemical compatibility a challenge, as this can be harsh chemicals such as H₂S, N₂, Benzene, or any type of hydrocarbon vapor. In addition, due to these vapors being flammable, and where they are located within the Flare Gas Recovery Unit, a fire safe gasket is required. The gasket required needs to isolate, be chemically compatible with any type of vapor in the refinery and be fire safe.

SIGNIFICANCE

At this line in the Flare Gas Recovery Unit, it is critical for a solution to be made that ensures there will be no leaks at any time during the process, as depending on what is going through the flare gas piping, these chemicals can be deadly and dangerous. If a gasket were to degrade over time, this can lead to a great safety risk. In addition, in the event of a fire, it is critical to have a gasket that can seal this flammable material, to ensure that a fire situation does not escalate due to leaks from the line.

OPERATING CONDITIONS

Temperature:	200 Deg F
Pressure:	140 psig
Media:	Flare Gas (Any Type of Hydrocarbon Vapor, H ₂ S, N ₂ , Benzene etc.)
Size/Class:	6" 150#; 12" 150#; ¾" 600#

SOLUTIONS

EVOLUTION® is the only gasket that provides the isolation necessary to break up the dissimilar metal flange connection, chemical compatibility to feel confident in the material performing long term no matter the media going through the flare gas piping, and fire safety in the case that a fire situation ever occurred. In addition, due to the tight sealing that EVOLUTION® provides, there is confidence that no matter what is going through the line, there will be no harmful emissions to the people and property around.

For more information, please visit: <http://www.gptindustries.com>