

CASE STUDY

Dual Containment Solution
When Looking For A
Safer Connection

FURON[®]
Pure Performance

ASK AN ENGINEER

The Challenge

Safety is a primary concern in all manufacturing processes and is of the utmost importance when working with highly hazardous chemicals, such as Hydrogen Fluoride or Sulfuric Acid. Fitting leaks and tubing bursts are exceptional, yet when they occur they are not only costly to the customer with down time and repair costs, but can damage equipment and more devastatingly, injure personnel.

Traditionally, **Furon Dual Containment Fittings** have been used to help reduce the possibility of a catastrophic leak by encapsulating the chemical delivery solution into a second redundant tube. In the case of the insert style Dual Containment fittings, a customer highlighted their concern regarding the fact that they primarily aim at containing damage that may occur on the tube and the fitting area, although it is possible for a leak to propagate through the nut threads. In this specific area, the leak could be defeating the purpose of the dual containment fitting. As a result, the customer asked Saint-Gobain to develop a solution to address their specific concern regarding this possibility.

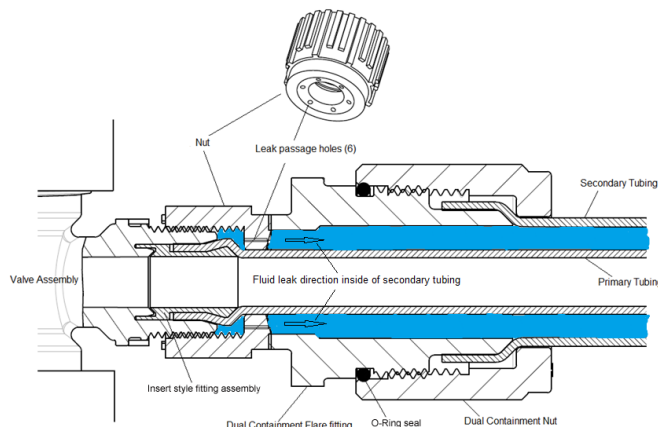
The Saint-Gobain Collaborative Design Services Solution

After evaluating the situation, Saint-Gobain's Furon product team designed a solution using the FlareGrip[®] fitting as the secondary fitting with modifications to the primary insert style fitting nut. This modification allows fluid to freely pass between the thread and tube sides of the nut (see drawing). By doing this, a leak on the seal of the primary fitting can be reliably transferred to the secondary tube where it can be safely detected.

The FlareGrip fitting can also leak through the threads if the seal were to fail. To address this, the secondary FlareGrip fitting was modified with an O-Ring behind the nut threads. This adds a redundant level of protection and sealing to the secondary fitting, preventing and further decreasing the possibility of a chemical leak breaching the secondary containment features.

Customer Experience

Saint-Gobain's customized Furon Dual Containment Fittings with insert style end connections provided the customer an extra level of safety for personnel and equipment protection, offering the ability to use valves, pumps and accessories with insert style fittings in the most demanding environments.



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