

# CASE STUDY

## Welded rupture disc improves safety on cryogenic propellant storage and transfer system

### THE CHALLENGE

Cryogenic gas bottles must maintain integrity even when subjected to fluctuating temperatures and they must fit certain connectors for the transfer systems.

### THE SOLUTION

We can adapt our welded disc assembly connections to suit almost any type of application, from threaded NSP / BPS / 1/2" NPT, male/female, tube stub, VCR-style fitting, muffle/baffle, free venting, and other connection types. In this case, by using 316L Stainless Steel for its resistance to embrittlement and strength at sub-zero temperatures, together with a custom threaded connection, we ensured a leak-tight seal across a wide range of temperature and atmospheric pressure conditions.

### ABOUT OE'S WELDED DISC ASSMBLIES

- Wide material range: 304L, 316L, Nickel, Inconel, Hastelloy, others such as gold or platinum on request
- Leak tightness verified to  $1 \times 10^{-8}$  cc/sec
- High operational performance and reliability
- Long-life cycle and maintenance-free design
- Controlled venting with rapid activation/opening
- Built to approved aerospace quality standards
- Custom designs tailored to application

### RUPTURE DISC SOLUTION SELECTED

→ **Custom Welded Assembly:** This unit combines a rupture disc with an inlet and/or outlet to form a single unit. MIG/TIG and electron-beam welding are possible. Electron-beam welding affords superior leak-tightness and the highest integrity possible. This is ideal for applications where it is essential that the process medium is not vented into the atmosphere.



A wide variety of sizes, shapes and connection types are possible.

### Let's talk mission success

Contact us today for a no-obligation discussion to explore how our advanced rupture disc designs can help you push the frontiers of technology - on land, at sea, in the air, and in space.

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