

# CASE STUDY

## Custom rupture discs protect battery systems in underwater vehicles

### THE CHALLENGE

A marine technology company contacted us with pressure safety requirements for the lithium-ion battery system on an autonomous underwater vehicle (AUV) they were developing. Their battery system required overpressure protection in case of thermal runaway, but the additional requirements for subsea operation were lengthy and complex. Two particularly critical factors were corrosion resistance and the need to ensure robust, reliable performance while keeping weight to a minimum.

### THE SOLUTION

Our team collaborated with the company's design team to create an innovative solution that would reliably mitigate the explosion risk and meet these complex yet critical requirements.

After defining the specifications with the customer, our engineers investigated the materials and properties that would produce the requested burst pressure, the required useful lifetime, and weight savings. We tested the initial concepts and developed them based on customer feedback.

This process led to the rapid evolution of an innovative and fully custom solution. The key to project's success was the close collaboration between the engineering teams at OsecoElfab and the customer, with support from Project Managers and Sales.

### RUPTURE DISC SOLUTION SELECTED

→ **PRO-LP:** The PRO-LP Low Pressure Disc offers fast, accurate pressure relief in a space-saving design. The disc can withstand full vacuum, and is available in a range of materials offering corrosion resistance.

The PRO-LP is available with our Dual-Gard breather technology, which combines gradual pressure equalization with emergency pressure relief in a single, space-saving device.

**PRO-LP**



**PRO-LP with Dual-Gard**



### 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.

[info@osecoelfab.com](mailto:info@osecoelfab.com)