

Case Study:

Devlon® engineered plastic ROV bucket for API subsea valve

Problem

Customer currently uses metal ROV (remotely operated vehicle) buckets which tend to be very expensive and very heavy when fitted onto smaller valves weighing between 15-20 kg depending upon design. This leads to issues when fitting in the work shop, installing subsea and adding hidden costs to shipping compared with thermoplastic versions. Due to how the metal buckets are manufactured there is also a very long lead time which impacted on delivery of the customer's projects.

Weight caused fitting issues

Application

Subsea compact 10,000 psi API 2 - 1/16" ball valve

- Class 4 operation at 2711 Nm
- Temp range: -18°C to +45°C
- Tested in accordance to ISO 13628-8

Existing solution

Metal ROV bucket with additional anti-corrosion coatings and paint treatments

James Walker solution

A Devlon® V-API ROV round face bucket design was recommended as a solution for this application. Using a thermoplastic solution offered a huge reduction in weight and meant that other processes associated with using metal buckets, such as welding, paints and anti-corrosion layers weren't required. Removing all of these stages in the supply chain meant that the ROV buckets could be supplied directly from one location at a greatly reduced lead time.



Results and benefits

Using the subsea proven Devlon® ROV bucket has given the customer a weight saving of over 10kg per bucket - weighing in at only 4.5kg, massively helping with buoyancy and installation issues experienced with the metal designs. As the material is thermoplastic no coating or welding is required - lowering the cost and reducing the lead time for the parts. This has allowed the project to be supplied on a reduced time scale.

Weight saving, lowering costs and reducing lead time



Improved operational efficiency due to ease of installation



Reduced weight of overall design



Significantly reduced lead time



Reduced cost due to no welding or coating

To find out more speak Expert2Expert at

jameswalker.biz

