



## Case Study: Ballast Water System Upgrade



### Case Study Information

|             |                      |
|-------------|----------------------|
| Customer    | Shipyards            |
| Application | Ballast water system |
| Location    | UK                   |

### Key Challenges

1. Ability to handle seawater without corroding over time
2. Located in a potentially explosive environment
3. Ability to completely empty the ballast tank

### Equipment Supplied:

#### 2 x Azcue VM Vertical Inline Pumps with ATEX motor & priming pump

|               |  |
|---------------|--|
| Type:         | VM-EP-200/34                                   |
| Application:  | Ballast water transfer                         |
| Installation: | Vertical in-line                               |
| Pump Body:    | Bronze   |
| Impeller:     | Bronze   |
| Voltage:      | 440V   |
| Motor:        | ATEX rating: Ex(d) IIB T4 Motor                |
| Priming Pump  | Electric priming - ATEX to rating Ex(d) IIB T4 |

### Enquiry:

- ✓ Castle Pumps received an enquiry from a new shipyard customer in the UK that was upgrading their ballast water system on board a vessel and required new ballast pumps. This upgrade was needed to meet the International Maritime Organisation's Ballast Water Management D2 requirements of onboard ballast water treatment, which all vessels must comply with by 7th September 2024.

As ballast water pumps transfer seawater to and from the ballast tanks in order to add weight to the ship for stability, the safety of the ship relies upon them and therefore reliability is key. At times, the complete emptying of the ballast tank may be required. The customer also informed us that these pumps would be located in an ATEX environment on this particular vessel.

### Solution:

- ✓ Reliability and long service life were such a key part of this enquiry, which as the UK agent of Azcue suited us perfectly. Azcue have over 100 years' pump design and manufacturing experience and are known globally as a top marine brand, with all pumps produced by Azcue type approved by classification societies and subject to an internal testing regime before dispatch.

We supplied these vertical inline centrifugal pumps in bronze, ensuring all wetted parts that come into contact with the seawater are non-ferrous and will not corrode overtime. To allow for the complete emptying of the ballast tank when required, we specified an electric priming pump. Both pumps' motors and their priming pumps were ATEX approved for safe use in the potentially flammable environment.

Major components of the ballast pumps such as bearings, mechanical seals and motors are available from world renowned companies, with service available locally from OEM's or through the network of over 90 Azcue Agents, so you are never too far away from the part you need to get the pump back up and running.