

Specification - Dry Dock Pumps: Reference BUS003_0081_1.2



1. Background

Penzance Dry Dock (PDD) is famously steeped in history, currently being the oldest operational dry dock of its type in Europe but requires drastic investment after decades of neglect and dilapidations. While the surrounding shipyards, across the county and country have seen investment, PDD has slipped through the net time and time again.

PDD plans to complete a large refit by March 2025. PDD will become the engineering powerhouse that it once was, but with more abilities than ever before. This facility has primarily been ship repair only, but now we are supporting multiple areas of the market, ship repair, ship building, mass fabrication and most importantly training and skill development.

This capital investment, part-funded by the UK Government through the UK Shared Prosperity Fund, will see the site brought up to an even playing field with the rest of industry, with new, safer lifting systems and the dilapidations being rectified. We will see our efficiency drastically increased which in turn will assist in reducing our carbon footprint.

As part of this refit, PDD wishes to replace our current pumping system to the dry dock with a new one, moving away from conventional pumps and motors above the water line.

Currently, the pumps we have, have two 45kw motors. PDD does not wish to exceed the current amperage draw on start up by any newly installed motors.

The key objectives are:

- To replace the current aged pump system, estimated to be installed 40 to 50 years ago and to install a new modern pumping system to the dry docks that will considerably improve the efficiency of the emptying of the dry docks. The current operational time from full to empty is approximately 4 hours with 2 pumps.

2. Specification

Penzance Dry Docks is seeking the design, build, installation and commissioning of the pumping system (subject to planning).

Specific requirements of this tender, which the tenderers will need to satisfy, and the successful tenderer will be required to deliver on are:

- The new system fit within the confines of the dry dock sump.
- This pumping system must discharge through the existing 2 x 300mm pipes. The winning bidder must provide a suitable bolt of manifold.
- The dry dock measures (approx.) 13 x 75 x 5.5m, with a holding capacity of 5300m³. The aim is to reduce the pumping out time to one hour, or as close as.
- The starters for the pumps will have to all be soft start, from one panel, where each pump will be started in turn.
- An additional pump is also required, to be set to auto, to be the level maintaining pump to automatically start when the water ingress exceed the limits on a float switch.
- The system must also provide built in redundancy, to allow for maintenance / servicing and break downs.
- As part of commissioning of the pumps PDD will require training in operation and a servicing programme from the appointed supplier.
- A key feature for any supply provided will be the provision of spare parts being readily available. All pumping system parts and starter are to be quoted for separately.
- Details of lead time is essential.
- Evidence that the proposed system is a proven concept which can operate in the marine environment akin with the drydock site.
- Costs to include:
 - the supply of pumps, kit and associated parts to include shipping delivery and transportation costs to PDD site.
 - Fabrication
 - Installation
 - Commissioning, including testing and training.

- As part of the commissioning of the pumps, onsite training **must** be provided. In addition, the appointed contractor shall, as part of ongoing support and maintenance, provide training as may be commissioned from time to time by PDD.
- An ongoing annual maintenance contract for the servicing and Regulatory inspections compliance (for 5 years). This is to be scheduled and included in the costings provided. Suppliers must be able to provide ongoing maintenance, along the following:
 - o Emergency call out response times 4 hours
 - o High priority - next working day (if before 3 pm) and
 - o Non-critical - non-operational support within 7 working days.
- Pumps to have an operational design life of 10 years minimum, subject to maintenance in line with the manufacturer's recommendations.
- The design, materials, installations, inspections, maintenance and operations of the pumps to comply with all relevant Regulatory requirements and standards e.g. British Standards (BS), European Standards / Norm (EN), international Standards Organisation (ISO) or equivalent.
- Decommissioning and removal of the existing pumps system prior to installation of the new.
- Work to be carried out during normal working hours. Installation to be completed by February 2025.