



Project: Alexandra Docks

Location: Cardiff

Flap Valves 14 Metres Deep

Client: Sea-Lift Diving Ltd



In 2018 Aquatic Control Engineering Ltd (ACE) were approached by Sea-Lift Diving Ltd for the supply of four flap valves. Sea-Lift Diving had been contracted by the Association of British Ports (ABP) to project manage, survey the site, source, supply and install the flap valves. The flap valves were to be fitted at a pumping station responsible for the refilling of the docks when too much water was lost by locking ships to sea. The valves were to be installed by the Sea-Lift Diving divers 14 metres deep.

Due to the considerable amount of silt at the location ACE recommended a double flap solution. This would ensure that should the bottom flap become silted up and blocked the top flap would continue to open. Sea-Lift Diving provided ACE all the drawings from the outlets and discharge chamber. These drawings were then confirmed by a detailed dive survey.



The ACE Technical team worked closely with the Sea-Lift Diving team to take into consideration the considerable difficulties the divers would face in fitting the flap valves. To ensure the fitting was as smooth and practical as possible minimal, chunky fittings were designed. This meant the divers could work quickly in the near zero visibility conditions faced 14 metres down. Once the design proposals and fitting procedures had been agreed the designs were sent to manufacture.

Thanks to the level of diligence taken in the design phase by both ACE and Sea-Lift Diving the flap valves were installed within the scheduled time, with no extra days of dive time required.



"The flap valves installed were a perfect solution, 100% fit for purpose, due to the excellent communication between Sea-Lift, Aquatic Control Engineering and KWT the designer and manufacturer. The ingenuity for ease of installation with detailed engineering were of a high standard and so was the quality of the flap valves. Sea-Lift Diving Ltd would be happy to recommend Aquatic Control Engineering to other customers."
- Bryan Waddell the operational director

Aquatic Control Engineering Ltd would like to thank Sea-Lift Diving Ltd for their excellent cooperation in delivering this project.

Aquatic Control Engineering Ltd

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