

CAISSON MANAGEMENT

PROJECT INFORMATION

Date: April 2024
Location: Offshore North Sea Asset
HSEQ Statistics: Zero incidents

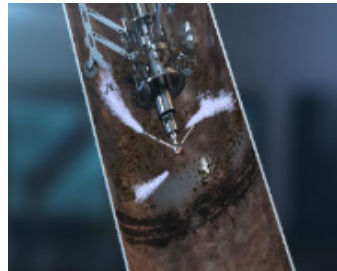


Photo: Cleaning

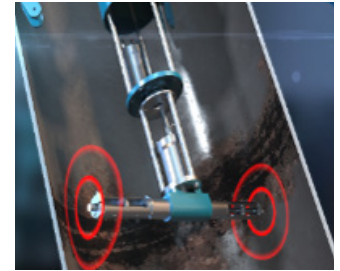


Photo: Inspection

DEFINITION

Caissons are essential to an asset’s operation. Seawater and firewater lift pumps are a critical component to the safety, operation and production of the platform and can become problematic due to stress, fatigue, increased corrosion, failure through cracking and through-wall defects.

SCOPE OF WORK

Following the failure of a seawater lift pump on an offshore asset, Stork was contracted by a major UKCS North Sea operator to carry out full visual and ultrasonic (UT) wall thickness inspections on the caisson prior to the pump being reinstated. Back in 2018, Stork’s specialist caisson technicians conducted the same inspection when it was found there were areas of corrosion with significant reduction in wall thickness.

STORK’S SOLUTION

Before works could be carried out to repair and/or replace the seawater lift pump, Stork cleaned and inspected the caisson.

To ensure it was fit-for-purpose and not a potential dropped object, Stork performed a series of visual and ultrasonic inspections of the internal diameter of the caisson. Our experts remotely deployed camera systems to provide data on the general condition of the sidewalls and levels of cleanliness.

Following the initial visual inspection, Stork’s High-Pressure (HP) remote jetting package was used to remove all marine growth and scale. After a final visual inspection, our specialist ultrasonic inspection tooling was utilised to map the wall thickness of the caisson and highlight any further areas of corrosion or wall defects.

RESULTS & BENEFITS

- As the 2018 inspection noted, care had to be taken when using high pressure jetting to ensure no damage was inflicted to the caisson during cleaning operations. Our remote HP jetting units allow for variable pressure adjustment
- Using Stork’s state-of-the-art ultrasonic inspection tool, caisson wall thickness can be mapped. This highlights specific areas of corrosion or damage. Our ultrasonic tool also reduces set-up times, produces higher quality results and improves inspection times **by up to 40%**
- The project was delivered ahead of schedule (11 days) meaning cost savings for our client
- The successfully executed workscope and onsite reporting was met with extremely positive feedback from both the platform and our client’s onshore team

Stork’s complete caisson management solutions ensure caissons are fit-for continued service, while providing asset owners with confidence in their caisson integrity status. As part of this service Stork provides an effective management programme ensuring reliability, technical integrity, safety and regulatory compliance.

For more information, visit stork.com/uk.