

# TECHNICAL SPECIFICATION

## Caisson and Riser Inspections

Stork is a market leader in the provision of remote inspection services. With over 15 years experience specific to caissons and risers, we pride ourselves in listening to our clients which enables us to provide a complete inspection solution tailored to their requirements.

Stork has gained a reputation for providing clients with bespoke solutions for challenging inspection problems. This is obtained through our well developed and robust inspection procedures; delivering effective and efficient data, minimising project downtime.

Stork's Inspection Solutions can be used as part of our client's Integrity Management Program, either as a one-off workscope or an on-going Inspection Maintenance Program.

Remote Visual Inspection combined with defined wall thickness values gained by an ultrasonic inspection allow fitness for service assessments, finite element analysis and structural calculations to be carried out on any identified defects without the need for re-inspection.

Fatigue failure has led to dropped pump string sections including Anti Fouling anodes and impeller bowls for which we have designed, custom built and implemented tooling to assist with their retrieval.

Ultrasonic C-scan inspection of caissons can be limited due to liner repairs which are very common in North Sea assets. Stork has procured a solution to accommodate changing diameters within a caisson.



### Services offered include:

- Remote Visual Inspection (RVI)
- Ultrasonic Wall Thickness Mapping
- 3D Laser Profiling
- High Pressure Water/ Jet Cleaning
- Ouality checks and Project Management of caisson repairs/ replacement, utilising internal inspection techniques



## The Stork inspection Shark Tool

The Stork inspection Shark Tool can fit into caissons ranging from 26" to 40". Two hydraulic pistons collapse the body of the tool so it can fit through liner repairs or other obstacles. Once the Shark Tool is lowered past the obstruction, the hydraulic pistons are activated to fully centralise the tool.

The hydraulic centraliser and ultrasonic instrument fitted within the tool can be adapted to accommodate various sizes of pipe work.

Fully centralised, the Shark Tool can still operate in heavy sea states and also improve ultrasonic data collection. C-Scans can be retrieved up to 0.5 metres sections and in optimal conditions, the Shark Tool can collect approximately 8 metres per hour. The benefits of the Shark Tool state that 100% of the subsea surface can be inspected. Ultrasonic inspection gives a defined, quantifiable and direct measurement of remaining wall thickness.

Our bespoke tools can provide wall thickness mapping over 100% of the subsea surface, providing a complete inspection.

Using this information along with a combined RVI, Stork can provide a complete inspection solution:

- Inspection capabilities in pipework up to 50" internal diameter
- The inspection tool can manoeuvre caisson obstructions and repairs
- Fully integrated video, ultrasonic and high pressure water jetting
- Scale / Surface corrosion removed – increasing pump performance
- Restricting the need for Divers / ROV which reduces down time

