

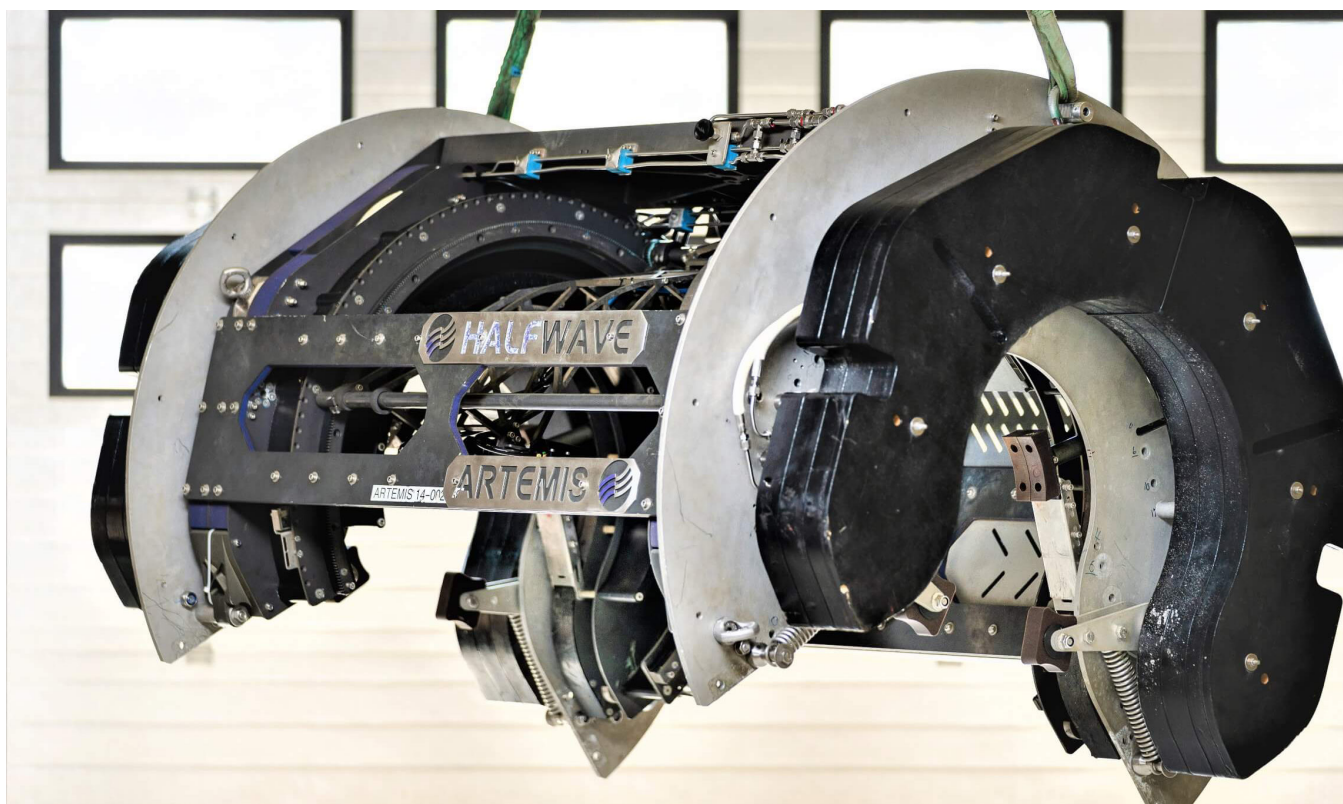
The "Unpiggable" Flowline

# ARTEMIS®

Case Study

# ARTEMIS®

## The right way to measure pipe integrity



### The Challenge – Find potential pipe anomalies fast and accurately

With operating and development costs rising in the North Sea, companies are required to operate more cost efficiently and utilise their assets effectively. With many platforms now extending production well beyond their original design life, increased maintenance and asset integrity activity is required to support the extended life cycle of asset.

Aker BP, a fully-fledged E&P company with exploration, development and production activities on the Norwegian Continental Shelf (NCS), decided to re-develop the Hod field which had been out of operation since 2012.

Stimulated by reduced taxation on marginal field developments in Norway, the company decided to revitalise the field, located off the coast of Norway via a subsea tie back from Hod to Valhall.

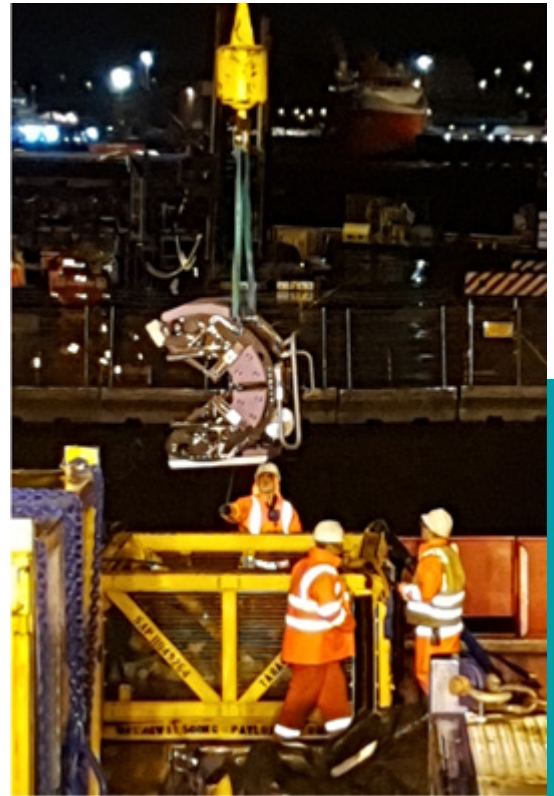
Prior to carrying out hot tapping activities by Subsea 7, the integrity of this location required to be inspected. If the area featured anomalies, it could potentially pose a risk to the operation. To overcome this and avoid any interruptions to production, inspection technology was needed to provide an accurate and efficient assessment.

## The Solution – **ARTEMIS®** subsea inspections provide an accurate condition of pipeline integrity

Inspecting the pipeline for anomalies is necessary to check and record the suitability of the pipeline location for tie-ins of new pipelines. The results are used to verify that the tie-in connection points of the pipeline are fit for the critical hot-tap operation.

After assessing the available technologies in the market for the workscope, Subsea 7 commissioned TSC Subsea as the company could provide all the required data in a single operation accurately and efficiently, thereby reducing overall vessel time.

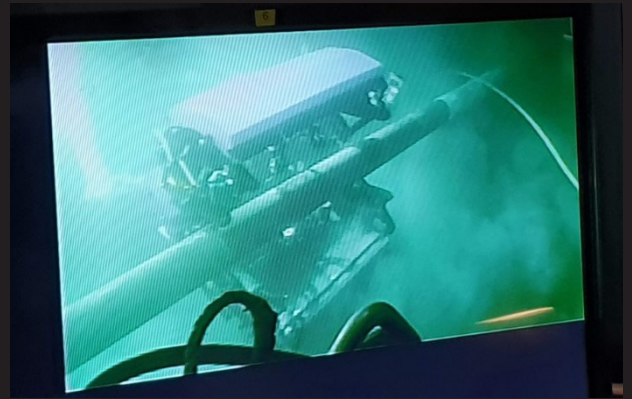
TSC Subsea used the **ARTEMIS®**, that is based on its unique Acoustic Resonance Technology (**ART**) to provide information on wall thickness, possible dents and ovalities with a high degree of accuracy. Most importantly, **ART** is able to provide accurate wall thickness measurement through coating, which means the asset owner does not need to remove the pipeline coating. The **ARTEMIS®** is remotely deployed using the ROV and is capable to work in deep waters.



The clients see the value proposition in ART for inspection and have been adopting the ART inspection for both in-line inspection and external subsea pipeline inspection.

# RESULTS

Inspections are done fast for good measure



## The operation was completed smoothly and according to the plan.

The ARTEMIS® was able to inspect one location using 5 separate scans within 4 hours and provided the client with clear wall thickness and ovality inspection result.

The ARTEMIS® was able to complete the inspection with less than the dedicated time that are normally allocated to these types of operations.

ARTEMIS® is approximately 4 times quicker than other technologies or combination of techniques for this scope of work. The required data had to be available in a short timeframe to maximise time spent in the sea and avoid a long wait for results.

Requirements for the work are governed by DNVGL-ST-F101 and confirm that the pipeline is within certain tolerances along a given pipeline length.

TSC Subsea is a market leading subsea inspection service provider and part of the Eddyfi NDT group.

We deliver cost effective technology solutions to address industry challenges providing accurate and reliable inspection data that allows our customers to make informed choices in order to maintain the integrity of critical assets.

Key to TSC Subsea's offering is its patented ultra-wideband Acoustic Resonance Technology (ART) & Alternating Current Field Measurement (ACFM®), which offers a broad range of innovative and disruptive advanced subsea inspection technologies.

TSC Subsea is headquartered in Bergen, Norway. The company also has a primary facility in Milton Keynes, UK and has recently expanded operations into Macae, Brazil.

Learn more about TSC Subsea ART and ACFM inspection services at: <https://www.tscsubsea.com>