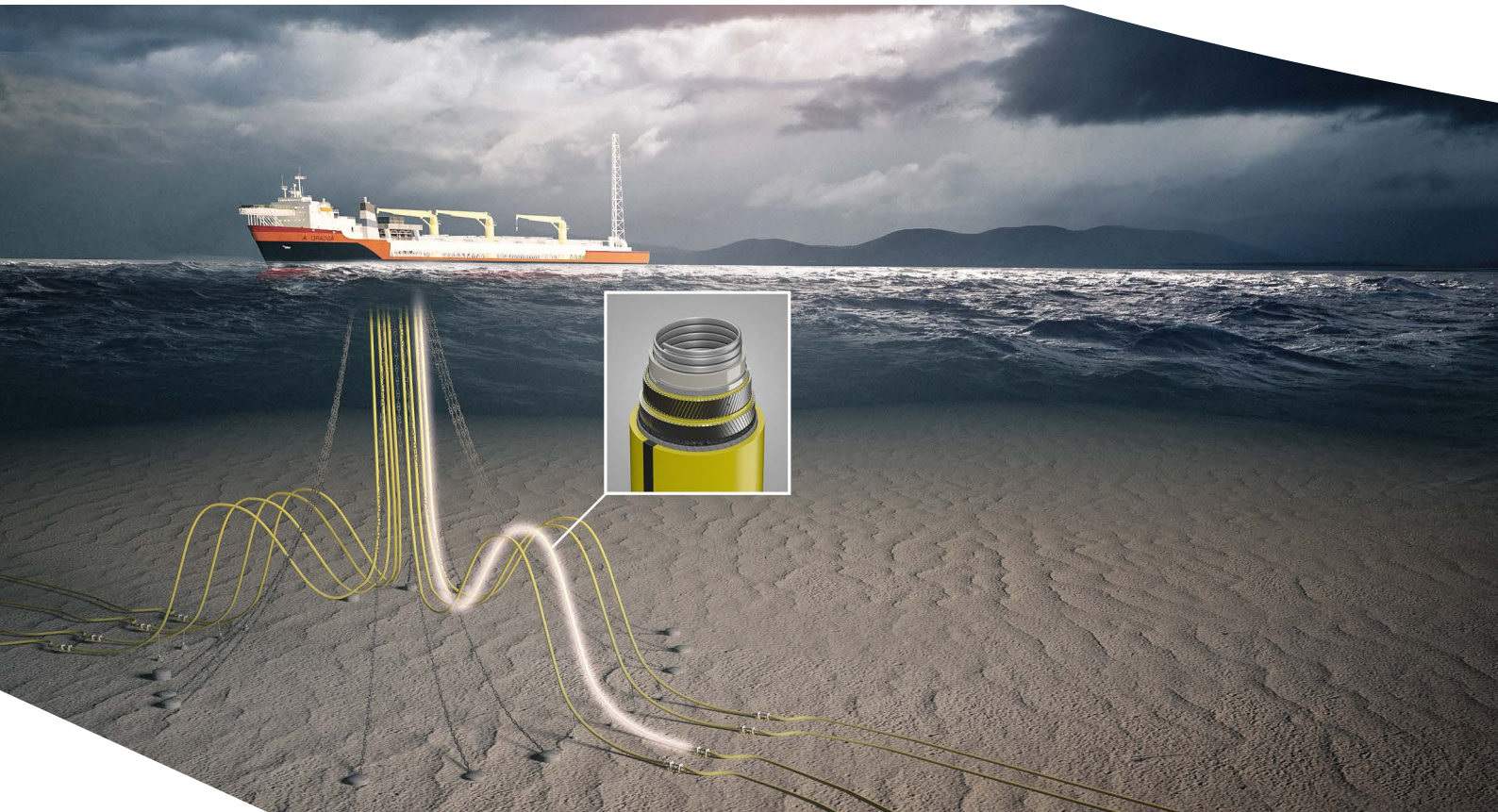


# Integrity Management - Flexible Pipes

*Safe and cost efficient operation of flexible pipes*

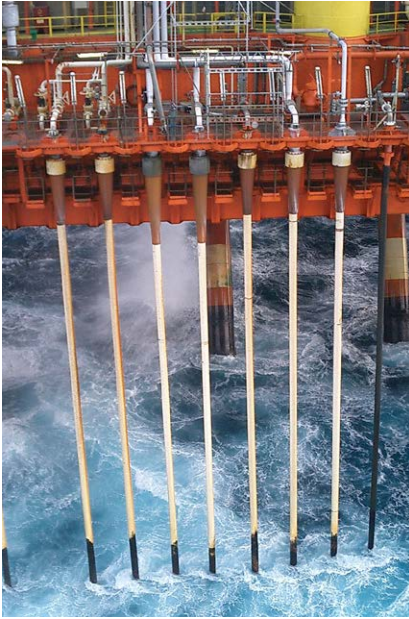


*4Subsea provides dedicated high-level expertise helping our clients achieve reliable and efficient operation of flexible pipelines. Our goal is to enable full service life with acceptable risk management strategies, and safe and cost effective operation without any incidents or shutdown.*

4Subsea offers products, services, and software related to flexible pipes, umbilicals, and ancillaries used for subsea operations, including **Annulus Vent Gas Monitoring (AMOS™)**, **Portable Annulus Tester (PAT™)**, **Integrity Management**, **Repair Clamps (EPIC™)**, **FlexTrack™**, **FlexIns™**, and **Untethered Pipe Inspection Tool (UPIT™)**. We specialise in **Flexible Pipe Engineering** and **Research**.

## KEY DELIVERABLES

- Advanced Integrity Management strategies and support
- A comprehensive, cost effective service package
- Both offshore and onshore services
- Concept to end-of-life range of service
- Digitised solution with online Integrity Management portal



## Integrity Management

From concept level through end-of-life we provide on- and offshore services related to assessing system failure drivers and modes, associated risk level assessment and developing integrity management strategies. Furthermore, 4Subsea provides continuous integrity management support, including ITR activities, to monitor the current condition of the flexibles. An online Integrity Management portal ensures that updated information and system status are always available for the client.

## Condition Monitoring

- Establishment of integrity and monitoring programs
- Evaluation of operational data
- Annulus vent gas monitoring
- Advanced PA11 ageing evaluation
- Life extension
- Failure mode investigation
- Risk assessment

## Research and Development

- Failure investigation of flexible pipes
- Handbook on flexible pipes
- Joint industry projects
  - Polyamide in flexibles
  - Corrosion monitoring



## Offshore Work

- Annulus volume testing
- Leak detection
- Outer sheath repair
- Re-establishment of annulus vent (topside and subsea)
- Project specific repair and monitoring solutions



## Key Deliverables

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4Subsea is a leading provider of technology and services that help operators maintain production from subsea oil and gas fields and offshore wind farms. By combining expert engineering competence, practical experience and a digital service, we ensure the integrity of assets all the way from reservoir to deck.

We deliver solutions on a unique digital platform, aiming to be in the forefront of digitising oil, gas and offshore wind operations worldwide. The company was established in 2007, and clients include all the major oil and gas operators as well as the large suppliers of subsea equipment.

Click [here](#) to view a short video of our solutions and offerings.

**4Subsea - Share ideas, move forward**

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