



# FUGRO INCLINOCAM®

In challenging offshore conditions, where efficient and safe operations are a must, Fugro's proven and patented InclinoCam® vision-based technology provides accurate and continuous verticality and heading measurement during offshore piling operations.

## PROVEN AND ACCURATE SOLUTION

Clients are in need of a trustworthy solution to help them position a monopile within strict project error budgets in the fastest and safest way possible. With over 500+ monopiles installed within tolerance, Fugro InclinoCam® has proven to be the accurate and cost-efficient technology for safer and faster offshore piling operations.

Fugro InclinoCam® combines powerful vision algorithms with two high resolution machine vision cameras, mounted inside all-weather housings, to continuously track the edges of the monopile.

A single operator can monitor the inclination and tolerances throughout the piling process, without interrupting the operations.

The touchless methodology used with InclinoCam® results in significant time savings when compared to traditional monitoring techniques.

The continuous monitoring during piling operations providing optimal control of verticality can immediately identify issues which can cause pile refusal.

Robust and adaptable, the compact InclinoCam® system is easy to deploy and set up, and can operate even during adverse weather or low-light conditions.

## BENEFITS

- Continuous, real-time information displayed in an intuitive way for simple decision making
- Proven and trusted positioning method for monopiles through powerful edge detection
- Reduced HSSE risk by utilising a touchless solution, not requiring personnel to approach the monopile during operations
- Flexible and cost-efficient solution for jack-ups and dynamic positioned vessels that can be combined with other technologies for complete installation monitoring

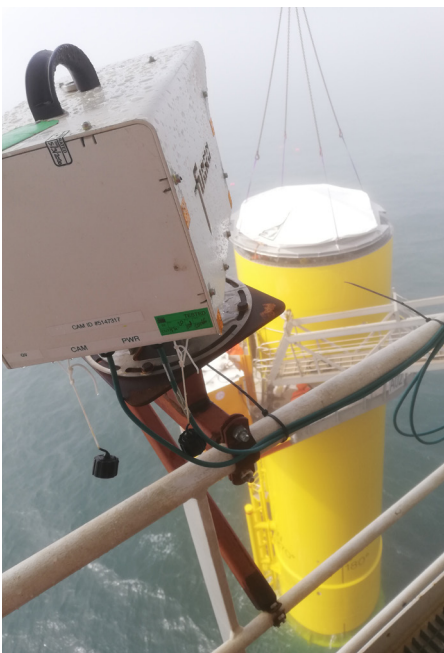
## HARDWARE

Powering the InclinoCam® solution is a ruggedised high resolution Fugro advanced vision camera with robust optics. The camera and inertial measurement unit (IMU) units are calibrated in accordance with Fugro QA processes to ensure accurate survey-grade results, with inclination up to 0.07° and heading up to 0.8°.

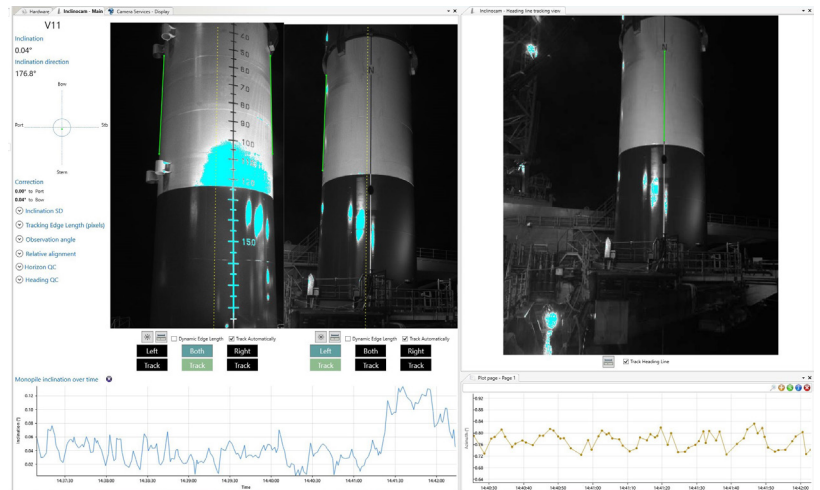
The IMU adheres to Maritime Navigation and Radiocommunication Equipment and Systems (IEC60945).



IP67 rated camera housing with integrated motion sensors (420 x 220 x 320 mm)



Installation of the Fugro camera systems



The intuitive InclinoCam® interface provides a real-time overview of both inclination and heading values of the monopile during installation

