



Drone Inspections

For confined spaces and other inaccessible places of marine cargo tanks, ballast tanks and cargo holds

Drone Inspections

Bernhard Schulte Shipmanagement's Fleet Maintenance & Repair team has established a group of experts specialised on drone inspections for different types of vessels, including oil and chemical tankers, gas carriers, bulkers and container vessels. Our drone operators have an extensive experience of 15 years in flying unmanned aerial vehicles.

The main intention is to attend vessels globally, mostly before dry dockings (pre-docking inspections of coated cargo tanks on chemical tankers to evaluate coating

condition), or during dry dockings, and replace costly inspections (staging, rafting, rope access) with drones, which provide accurate results at a fraction of the cost and time.

This solution has been developed for customers in the marine as well as offshore oil & gas industries, who are looking for a faster, less expensive and safer alternative for confined spaces and hazardous locations' visual inspections.

Types of Drone Inspections

Internal

- Class / Flag inspections
- Planned maintenance inspections
- Ad-hoc inspections (failures, breakdowns)
- Pre-repair evaluations (pre-docking, more accurate budgeting)
- Pre-purchase inspections

External

- Hull inspections (dock and in-water)
- Structural and coating
- Cargo gear inspections
- Chimneys, masts
- Anchors, fairleads, anchor chains
- Loadline marking verification

Main Features

- Customisation of the inspection based on the customer's requirements (tank size, camera quality, flight time, etc.)
- Ability to fly in confined spaces without GPS and compass signal
- Ability to perform BVLOS inspections - pilot and inspector remain outside the inspected area (no need for tank ventilation)
- Different types of inspection reports based on the customer needs
- Up to 12 minutes of flight

What can Drone Inspections be used for?

- General visual inspections
- Condition evaluation
- Coating verification
- Structural integrity
- Welding visual inspections
- Corrosion evaluation

Why Drone Inspections?

- They save up to **80-90%** of preparation time and identify fast the problem
- The cost is only **10-20%** of traditional inspections costs, e.g. scaffolding erection, rope access services or cherry picker/ crane rental
- They help to prioritise further inspections, maintenance and repairs
- They are controlled remotely without entering the tanks, so there is no need for people to work at height or face dangerous situations
- The entire inspection flight is recorded on an SD card, which is provided to the customer and can be used as future reference during the next inspection cycle

Future developments coming soon

As an additional step, drone inspections can be used for UTM (Ultrasonic Thickness Measurement) inspections as well as crack detection in welding seams. This innovative technology will further provide significant cost benefits to customers.

Contact

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