VISUAL INSPECTION: UNMANNED AERIAL VEHICLES

REMOTE STRUCTURE ANALYSIS
WE MAKE DRONES WORK

The use of unmanned aerial systems (drones) is established as a leading method of survey, inspection and maintenance of UKCS offshore oil and gas installations.

Bilfinger Salamis UK’s inspection department owns and operates drones, controlled by our qualified pilots, who use them to carry out close visual and thermal inspections in remote and difficult-to-reach areas such as:

- Flare towers
- Cranes
- Drilling derricks
- Helideck support structures
- Under deck/splash zone
- Risers/caissons

ENHANCED SAFETY - INCREASED EFFICIENCY

Not only does the use of drones for offshore inspection reduce the risk to staff, but it also saves time, resources and cost. Scaffold and rope access are no longer required as inspection can be carried out from a safe location, reducing any risk to personnel.

Bilfinger drone technology can be deployed on an ad hoc basis like any other service provider, however, in addition to our ad hoc services, Bilfinger also train our core technicians to become fully competent UAV pilots. Therefore in addition to the advantages that the drone technology provides, Bilfinger can provide all this with the advantages of no additional personnel requirements.

Bilfinger’s drones are piloted by experienced pilots and/or NDT technicians which allows for instant analysis of results, and completion of detailed NDT reports. Our technicians can then carry out work instantly, if required.

Advantages:
- Utilisation of platform contract-familiar personnel
- Instant analysis of results, and completion of detailed NDT reports
- NDT technician can carry out fallback work as and when required
- Drones can be included as part of structural team equipment and incorporated into structural inspection scopes
- Faster under deck and flare inspections with lower risk
- Reduces the need for excessive scaffolding and/or rope access requirements
- Less risk and expense than some conventional techniques
- Precise structure analysis and quick damage detection
- Fast analysis and inspection of remote/difficult access areas

CAA ACCREDITATION

There are strict minimum requirements and regulations for providing a UAS inspection service, both on and offshore for oil and gas industry customers.

All UAS operators must obtain the UK Civil Aviation Authority Permission for Commercial Operations accreditation, and all pilots must achieve the CAA Permissions for Aerial Work standard.

Bilfinger is fully CAA-certified, and provides a multi-disciplined inspection team/inspector fully qualified and certified to pilot UAVs in an offshore environment. This allows us to offer a full visual inspection package to our clients.

Our pilots are experienced in:
- Aerial Surveying
- Aerial Photography
- Aerial Inspection
- Crane Inspection
- Aerial Surveys and Aerial Research
- Aerial operations in heavily congested areas

Falcon 8 - Ideally suited for offshore oil and gas use

Bilfinger spent a significant amount of time researching the most suitable UAV for use in an offshore environment.

After careful consideration and discussion with industry experts, Bilfinger invested in the Falcon 8 Trinity Inspection Package.

The Falcon 8’s full package includes a high resolution digital camera which makes it ideal for visual inspection. In addition to this the UAV comes fitted with a fully functional FLIR camera which includes second generation digital enhancement technology, making even small thermal leaks detectable from large distances.

The Falcon 8:
- Has a proven track record in an offshore environment
- Is saltwater tested and specifically designed to fly in any environment
- Allows a second operator camera control, with a specifically designed camera gimbal that allows for vertically upwards image capturing - ideal for under-deck inspection
- High GPS accuracy - extremely small positional corrections are possible with the utmost precision
- Lightweight and robust with redundant propulsion system - up to two rotors can ‘fail’ and the craft will still remain airborne