Offshore COT Tank Inspection ACE-A-E2

PROJECT INFORMATION

Project: Internal COT Tank Inspection

Type of facility: Offshore FSO

Industry: Oil & Gas

Safety: Minimal risk to involved personnel eliminating

working at height

Project efficiencies: 3 Day with UAV team vs 10-15 Days

with Rope Access team

SCOPE OF WORK

Visual Inspection of Cargo Oil Tank COT for class inspection approvals.

Due to time shortage, lack of bed spaces offshore and constant weather change, a UAV inspection was required to carry out the inspection.

SOLUTION

Air Control Entech were tasked with inspecting a clients Cargo Oil Tank to ascertain the current condition for Class inspection approvals.

The inspection of COT tank was carried out in 3 days. Due to the small size and the cage frame of the UAV difficult to see areas could be captured; even areas that would be hard to reach even with rope access or scaffolds. The 180-degree movement of the camera on the UAV allowed the team to capture hard to reach positions on the upper bulkhead.

The UAV team always operates as a team of 2. This allows the pilot to only concentrate on the flying, whilst a qualified inspector can identify the areas of interests to be captured.

The captured data was processed in same day and an interim report can be produced within a day of completing the inspection.









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RESULTS AND BENEFITS

Results;

- > Tank returned to normal operation faster then traditional methods
- > No expensive scaffold inside the tank
- No need for high-risk rope access work (working at height)
- Detailed 4k imagery and video to allow condition of Cellar deck and associated pipework to be reviewed by multiple stakeholders.
- > Greater visibility and enhanced maintenance planning potential for the client through provision of robust evidence on the physical state of inaccessible structure and pipes underdeck.
- > Use of multi-skilled teams reduced the risk with drone but retaining the inspection expertise, leading to greater control over project delivery.
- > Project delivered on time with no disruption to ongoing plant activities.

Factor	Conventional Access	UAV
Personnel Required	2 + 2 Standby/ Rescue team	1 Pilot & 1 Inspector
Duration	10-15 days	3 days
Impact on operations	Partial platform shutdown	In-service inspection
Hazard	High Risk	Low Risk
Differentiator	Some photos	Safer operationally Full 4k video High resolution stills





Contact info@aircontrolentech.com

