Reduction in safety risk and cost, the EM&I Group's "No Drydock... Safely"

The EM&I Group has been a market leader in asset integrity management services to the oil and gas industry for over 30 years. As a recipient of several safety awards they know that a focus on safety must be a priority and many of their innovations have been developed as a result of the recognised demand for improved safety and reduced costs.

There is an increasing trend for Floating Offshore Installations (FOIs) and Mobile Offshore Drilling Units (MODUs) to be more complex with a requirement to stay on station for extended periods. The challenge for owners and operators is to ensure that safety is not compromised whilst managing compliance, uptime, bed space allocations and operating costs.

EM&I have developed a range of services proven to help operators manage these challenges in a safe and effective way and ensuring regulatory and classification society compliance.

EM&I's 'No Drydock...Safely' is a system of innovative integrity management, inspection, maintenance, repair and corrosion protection services that keep assets on station with minimum production and operational impact. One such service is the ODIN™ diverless UWILD system.

Danny Constantinis CEO EM&I Group explained "Class and Flag introduced diver based underwater inspections in lieu of drydocking (UWILD) as an alternative to drydocking. However, dive operations incur a safety risk, use valuable bed space (POB) are weather dependent and costly. A joint industry project, Hull Inspection Techniques and Strategies (HITS), confirmed these concerns and this focused our development of an alternative UWILD approach with support and encouragement from SBM and ABS Class".

Once the basic methodologies had been developed and validated to SBM, ABS and Bahamas Flag the system was applied to two FPSOs in Brasil.

Danny Constantinis went on to say "These two projects demonstrated that ODIN met and exceeded expectations in delivering a safe survey with 76% reduction in POB and 20% cost reduction. Other important benefits were high quality integrity information and virtually no weather downtime. The POB reduction allowed other critical work to be completed earlier which significantly increased production and the reliable condition information will help the operator manage long term integrity more effectively".

David Mortlock Chief Technical Officer EM&I Group explained further "We carry out the structural inspections from within the hull using specialised NDT methods. This includes the inspection of sea chests and their stub pipes, bilge keel attachments, bottom and side shell plating, cruciform welds and overboard discharges. Inspections of critical isolation valves and the internals of sea chests are carried out using a 'hot tap' camera inserted via a special ODIN inspection port through which a cctv camera is inserted. We discounted the boroscope approach and chose a specialised camera system which gave a clear view of the valve condition and function".

Components inaccessible from inside the hull such as the rudder, propeller, mooring attachments etc. are inspected by deck launched mini ROV. Cathodic potential measurements are taken from the deck.

A major benefit of the ODIN Alternative UWILD is that it can be aligned with the Hull Continuous Survey programme which reduces the need for additional tank entries. EM&I's success with their ODIN Alternative UWILD continues with fleet wide application being planned and further orders underway for lease and oil major FOI operators.

The drilling industry is also looking at how ODIN can help keep their assets on station and on hire with negotiations for pilot programmes on deep water semi-submersible and drillships already underway with four major drilling contractors. Further information on the development of ODIN for FLNG applications and for the cleaning and maintenance of valves is planned to be released in 2015.

The results have proven, in a very practical way that ODIN meets and exceeds clients' requirements in reducing safety risk, reducing costs, improving data quality and improving certainty over project duration.