

## Cambla Supports Vessel Planning with Improved Software

International project services consultancy, Cambla, has released an upgraded version of its state-of-the-art software, the Schedule Animation Tool (S.A.T), to the global subsea market, as a result of high client demand.

The technology is a world-first, which has been developed to improve the accuracy, and significantly reduce the costs and safety risks associated with planning subsea operations. An online application, S.A.T, provides an accurate visual representation of a vessel's location and planned activities.

Cambla launched S.A.T. at Subsea Expo 2015, and has since invested in R&D to upgrade the tool. The new version includes features to improve overall user-functionality.

The new features include increased fleet management capabilities, an enhanced data input system, a function to display fixed infrastructures including oil and gas platforms, FPSOs, and wind turbines, a listing of all schedule issues and the animation models can now be produced even faster.

Cambla founder, Alexander MacLeod, said: "We are constantly evolving our product offering in-line with client requirements, and recognising a growing industry need for a cost effective way of planning vessel fleet activity, we have developed an upgraded version of our software.

"S.A.T. is a particularly useful resource for companies operating a large vessel fleet or planning a complex subsea project as it offers full fleet management support. The tool identifies occasions where

planned vessel activities clash, helping project teams to determine the most appropriate activities and deployment times for their entire fleet. This ensures vessels spend minimal time in port or waiting offshore, which reduces excess expenditure of up to millions of pounds and increases safety.

"It can often be difficult for a large project team to keep up to date with developments, particularly if they are based in different locations. We have developed S.A.T. to be web based which allows multiple-user access, ensuring strong communication and engagement between all stakeholders is maintained from the tendering stage of the project, through to planning and onwards to achieve a successful execution."

"We received a high level of enquiries and positive feedback when we initially launched S.A.T., and I expect that the new and improved version will be further welcomed by the industry."



Cambla founder Alexander MacLeod

## Technological Breakthrough of MEC-FIT™ Flexible Riser Inspection Technique

The capability of Innospection's MEC-FIT™ flexible riser inspection technique has again been successfully tested on new flexible riser specifications. The technique has been proven not only to be able to detect crack-like defects in both outer armour wire layers, but also the indications differentiating the angle of cracking, as well as providing gap determination of the cracks.

The aim of the test is to verify the MEC-FIT™ technique for an upcoming inspection task involving 13" Flexible Risers located on a FPU in the North Sea. The inspection challenges include the 55° wiring angle structure with tight crack-like defects expected to run into the surface under an angle of 45°. Secondly, in addition to the thick outer sheath of 15.3mm, an anti-wear tape of 2.5mm is also present between the two armour wire layers.

A simulated test sample established by placing wires with various flaw types at different locations and wire layer positions was used. Blind tests were performed on four different assemblies of the structure – with defects in the near side (facing the sensors) of the top layer representing the outer first armour layer, with defects in the far side of



Simulated flexible riser test

the top layer and the same assemblies in the bottom layer representing the inner second armour layer.

The test results showed that all through-cracks in all the layers can be detected. Part-depth cracks are detectable in the outer layer. The detectable crack size in relation to the wire thickness is 30% for the near side top layer, 60-70% for the far side top layer and 100% for both the near and far side of the bottom layer. From the point of view of defect detection through the tight wire structure and particularly the thick sheath, this is considered a massive success.

In preparation for this inspection, the MEC-Hug Crawler tool for deploying the MEC-FIT™ technique has been rebuilt to allow circumferential scanning to accommodate the scan requirements of the 55° flexible riser wiring structure. For the first time, the MEC-Hug Crawler tool will be deployed using an inspection-class ROV deployed from the installation. This would mean substantial savings for the operator as compared to using a work-class ROV.