

## Severn Subsea Technologies Develops Zone 0 Tool Detection Alarm

Severn Subsea Technologies (SST), part of the Severn Glocon Group, has developed Zone 0 rated tool detection sensor technology that reduces the risk of damage to the wellhead during tool string retrieval.

The Tool Detection Alarm (TDA) offers a safer method of locating the tool string as it is recovered to the surface. The whole system, including the control box and battery, is ATEX and IECEx certified intrinsically safe equipment for use in Zone 0 gas environments.

The TDA system positively locates the position of a tool string as it exits the well into platform pressure control equipment. A sensor informs the winch operator to take action to prevent the tool string hitting the riser seal head, reducing the risk of damaging completion equipment and potential loss of the tool string down the well. The TDA is particularly suitable for 'closed in' wells where there is no opportunity to see the tool string as it leaves the well.

Brian Green, SST managing director, said:

“The Tool Detection Alarm provides a safe method of monitoring a tool string during well intervention operations. Knowing when action needs to be taken will prevent damage to completion equipment and avoid the loss of the tool string.”

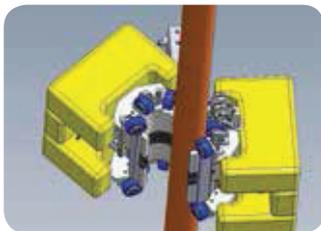


SST's Tool Detection Alarm (TDA)



## Mooring Line Inspection with MEC-Wire Scan Inspection Tool

Innospection completed its first mooring line inspection project on a FPSO in Norway in May 2014. Two mooring lines were inspected at dedicated areas for possible zinc layer removal or damages at the steel wires, due to seawater ingress as a result of the damaged plastic jacket.



Cracks and damages in the outer plastic jacket of mooring lines were detected during a visual wire rope inspection in 2012. This follow-up inspection was to detect the loss of the wire zinc cover and possible corrosion of the mooring line steel wires as a consequence of the damaged sheathing.

The inspection was performed utilising the customised MEC-Wire Scan tool which incorporates the MEC (Magnetic Eddy Current) technique with a specific developed flexible Eddy Current sensor array system.

The MEC technique is a further development of the fast corrosion screening Saturation Low Frequency Eddy Current technique proven in the field to be highly sensitive and accurate in the detection of internal and external defects and wall loss caused mainly by corrosion. This technique has been used for the inspection of subsea risers with typical Neoprene coating, caissons, pipelines, structures as well as for flexible risers in the detection of cracks and corrosion at the armoured wires.

The flexible Eddy Current sensor array system was specifically developed for larger circumferential area coverage due to the thickness of the polyethylene outer sheath and to follow the mooring line diameter changes where a repair patch might be in place. Hence, the induced electromagnetic field of the customised sensor array system was able to overcome a standoff of 33mm.

The original MEC-Wire Scan inspection tool was designed to open and close around the mooring line with the opening of the two magnet halves being fail safe arranged. Although the scanner sensors and magnet poles ran at a consistent standoff to the inspection surface, only the polyethylene covered wheels were in contact with the mooring line. The field tool for this specific inspection was modified to overcome the mooring line patched area.

Deployed by ROV, the inspection data was transferred via the ROV fibre optic cables to the control room where the inspection engineers evaluated and analysed the findings immediately while the offshore team continued with the inspection simultaneously.



The MEC-Wire Scan Inspection Tool

# Trelleborg and Proserv: Working Together to Meet the Challenge of Rapid Gas Decompression

Trelleborg is supplying advanced elastomer materials to enhance the performance of Proserv's subsea product line in order to provide a solution to rapid gas decompression.

One of the leading global players in the supply of seals and bearings to the offshore oil and gas market, Trelleborg Sealing Solutions, has supplied its XploR™ grade elastomer seals for initial testing. This is to help address the low temperature / high-pressure sealing performance of Proserv's subsea equipment and combat the issue of sour gas chemical compatibility.

The seals are to be used in an expanded range of Proserv's downhole and pipeline sampling tools, which are being upgraded and developed, including the Prolight, Procorro and Profisc product lines.

Daniel Grainger, key account manager at the Trelleborg Sealing Solutions oil and gas marketing office in Aberdeen, explains how industry leaders are turning to the sealing specialists in increasing numbers in a bid to overcome extreme conditions.

He said: "Seal damage and observed gas leaks caused by rapid gas decompression in elastomeric seals are extremely costly with significant safety and environmental implications for oilfield operators and equipment suppliers. "We are proud to be Proserv's partner for sealing technology. The partnership between the two companies is a meeting of like-minded players in the oil and gas industry, both striving for excellence and pushing the barriers of harsh environments."



Trelleborg & Proserv staff, holding a Type 5 Sample Bottle

David Bird, a senior engineer at Proserv, said: "Consistent and robust sealing solutions are a fundamental requirement in the design and development of every Proserv sampling system. "Proserv's oil and gas division is now actively harnessing Trelleborg's expertise in the development of projects that are tailored toward expanding our sample cylinder product range into more hostile service environments."



**innospection**



## Specialist for Subsea Inspection Services & Solutions

- Risers & Flexible Risers
- Caissons
- Subsea Structures & Pipelines
- Non-Piggable Pipelines
- Ship Hulls
- Complex Areas like Subsea Welds & Manifolds

Inspection solutions feature:

- ROV & Installation deployment
- High corrosion defect detection capabilities
- Fast scanning with no coating removal