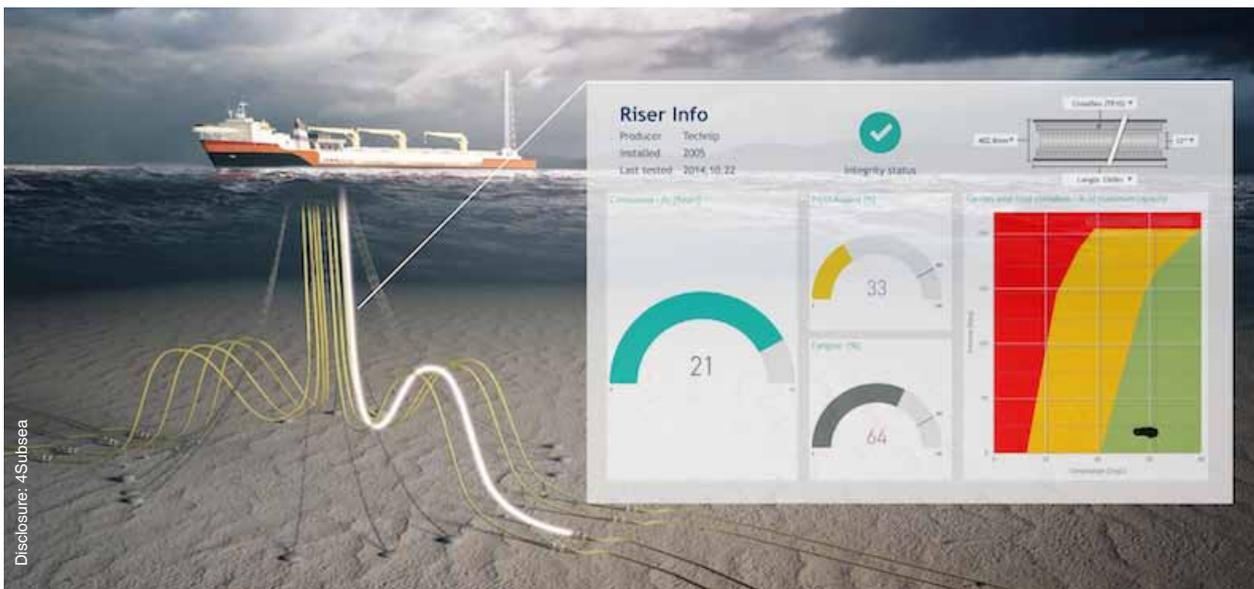


4SUBSEA: VIKINGS OF THE DIGITAL AGE

4Subsea, a company that has accumulated valuable experience in the turbulent waters of the North Sea’s, has set up an office in the city of Rio de Janeiro, to serve the Brazilian oil and gas sector. And it doesn’t rule out the idea of building infrastructure in Macaé. The Norwegian company recently won a three-year, R\$ 10 million contract with Shell Brasil and Coppe/UFRJ to extend the working life of flexible risers and reduce their operational risks.



To enhance safety and extend the lifecycle of offshore assets, Shell Brazil’s R&D project has brought together 4Subsea’s know-how in engineering services and digital solutions and Coppe/UFRJ’s capabilities in materials technology. Consequently, the Norwegian company will be able to leverage its North Sea operational experience and online monitoring technology to develop research into

the management of flexible pipeline integrity. Together with the Brazilian institution, 4Subsea will also develop a research program to enhance models capable of mitigating the aging of polymers and corrosion of steel.

4Subsea CEO **Peter Jenkins** says, “We are also conducting research focused on reducing the cost over the life cycle of flexible risers, in which other Brazilian operators are also participat-

ing”. According to the executive, the project encourages the development of digital and automated solutions for real-time monitoring of the flexible lines in operation. He adds that, “Brazil is the world’s largest market for flexible lines and subsea wells, areas in which we have special expertise. So our focus is on winning new contracts relating to flexible pipeline operations”.

In the vanguard of digitalization

4Subsea is at the forefront of the digitalization of subsea operations in the North Sea. The company’s CEO describes the company’s personnel as geeks and technological nerds who want to redefine how offshore oil fields and wind farms are operated. Jenkins emphasizes that, “We use our digital skills to automate engineering processes and raise the value of our services, while using the data to help the operators to reduce their costs”. To that end, the company’s two main technological products/services help to ensure that oil and gas production is maintained, thereby helping to reduce the risks and operating costs.

Used to manage the integrity of flexible risers, the Portable Annulus Tester is the world’s first system to fully automate the ring tension testing of lines. Jenkins explains that, “You connect it to the flexible line, press a button and the machine does the rest automatically. The results are uploaded to a digital platform, where operators get an immediate report on the health status of the equipment. The web service also allows 4Subsea to provide round-the-clock specialized technical support”. He compares the technology to a defibrillator, “It’s like being able to monitor your heart with a mobile phone and get an immediate assessment for your doctor”.



Photo: 4Subsea

Flex Track, on the other hand, allows the management and processing of information about the integrity of flexible lines and umbilicals. The technology, used by Shell and Statoil in the North Sea, provides easy access to operational data, in support of the decision making process. According to Nils Terje Nordsve, a senior engineer at Statoil, 4Subsea’s digital solutions are aligned with Statoil’s digitalization strategy. He says that, “Flex Track has brought about reductions in costs and operational risks, as well as avoiding the need for manual labor in the Asgaard field”.

Now the company (which already has offices in Oslo, Bergen and Kristiansand, in Norway) is present in Brazil. Peter Jenkins concludes, “It is absolutely essential for us to be present in Brazil, to ensure the success of the operations. We want to make use of digital and automated solutions to bring in new concepts and visions of the future”.