

CHEVRON TAHITI RISER FATIGUE MONITORING PROJECT AN INDUSTRY FIRST

When Chevron announced it was seeking a riser monitoring solution for its Tahiti development the scale and complexity of the project would make it an industry first.

THE PROBLEM

The operator wanted to guarantee the safety and longevity of its steel catenary risers by observing the effects of subsea forces, validating robustness and calculating fatigue damage.

Metin Karayaka of Chevron, explained: "We needed a technology provider to blaze new territory for us by providing state-of-the-art systems capable of characterizing the fundamental behaviour of SCRs."

THE SOLUTION

Pulse developed a fully hardwired system to provide real-time measurement of strain and motion endured by SCRs, configured with full redundancy and a life span of at least 10 years.

Sensors were placed along the SCR at the hang-off and touchdown regions; the INTEGRIpod for measuring motion and the INTEGRIstick for measuring strain.

Metin Karayaka said: "Pulse worked diligently to configure a monitoring system that addressed all of our needs. Their commitment to the success of the project was exceptional.

"This solution involved many first applications and we encountered numerous technical and execution challenges. Pulse had the right infrastructure to execute this highly technical subsea monitoring project."

THE RESULT

In the three years since it went live, the system has proven extremely reliable and the data invaluable, with Chevron proclaiming the overall project a huge success:

"The monitoring devices deployed during the project have proved to be very robust," added Metin.

"The system has been continuously recording data for the past three years at the hang-off and touchdown regions of our SCRs.

"This unique solution has already helped us understand SCR hydrodynamic behaviour and we expect to collect data for many more years to come."



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Metin Karayaka
Chevron