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## Offshore Platform Undergoes Simultaneous Joint Replacements in Gulf of Mexico

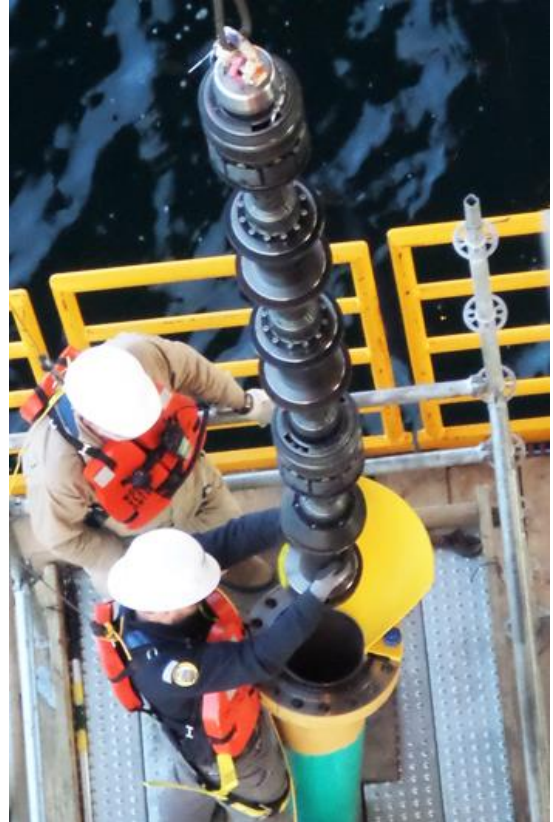
*T.D. Williamson uses non-intrusive double block and monitor isolation technology to ensure platform safety, increase efficiency, and deliver first-time run success*

### #OFFSHORE #OILANDGAS

**HOUSTON, TX, OCTOBER 1, 2015** – Operating in the deepwater Gulf of Mexico presents technical challenges that make assuring structural integrity and safety highly complex, time-consuming, and expensive. That’s why most offshore operators see even regularly scheduled maintenance activities as anything but routine.

For example, when an oil and gas exploration and production company prepared for the planned replacement of two flexible joints connecting two steel catenary risers to their tension leg platform 120 km (75 mi) off the coast of Louisiana, it could have chosen to bleed down and flood the entire pipeline—a costly, time-consuming, and potentially hazardous endeavor. Instead, the operator contracted T.D. Williamson (TDW) to perform simultaneous isolations on the platform’s 10-inch oil pipeline and 14-inch natural gas pipeline.

Jay Knudsen, TDW Project Manager, points out that as a result of the SmartPlug® double block and monitor isolations, only a very low volume of product needed to be evacuated before the inline joint replacements, reducing the project turnaround and overall cost. Effective seals on the two pipelines helped safeguard workers by preventing hydrocarbons, vapors, or seawater from backing onto the work platform, Knudsen adds.



### Pre-project testing helps assure first-time run success

Pigging through an offshore pipeline system can be a high-risk operation. But with proper planning, engineering, and execution, risks can be mitigated.

In this case, TDW assured the efficacy of its tools—and ensured that the isolation operations would achieve first-time run success—by performing communication and pull-tests in a test rig that replicated the platform’s risers.

In order to execute the isolations, the SmartPlug tools were launched into both the 10- and 14-inch pipelines and monitored by the through-wall SmartTrack™ pig tracking system.



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The 10-inch oil pipeline was first isolated using a combination of high friction and high sealing pigs that traveled a total distance of 84 m (276 ft). After the pipeline section was depressurized, it was partially lifted out of the seawater to allow access to the flexible joint. Once the new joint was in place, the pipeline was re-pressurized. The SmartPlug tool was then lowered by cable into the riser—below the new flexible joint—where it was used, along with a ported blind flange, to create an isolation barrier for hydrotesting the new welds.

### **Inline inspection ensures isolation tool can pass through check valve**

The 14-inch natural gas line isolation followed a similar, yet more intricate, course: A three-module SmartPlug tool traveled a total distance of 72 m (250 ft) to perform a DNV GL-certified, double block and monitor isolation and provide an additional barrier to enable a hydrotest after the flexible joint was replaced.

What made the isolation tool's journey more complex was the fact that it had to pass through the platform's inline check valve on its way through the pipeline. In order to assure that the check valve could accept the tool, TDW recommended that the line first be inspected using a high resolution deformation inspection tool. The inline inspection (ILI) data was utilized in the SmartPlug tool piggability report during the engineering phase, giving both TDW and the client the confidence that the tool would make it through the check valve and that the project could be performed successfully.

"The ILI information and engineering studies provided a high level of assurance that the line was acceptable for SmartPlug tool operations," Knudsen explains. "Data from the ILI run was useful to the client's process engineers and may be applicable to additional projects."

According to the operator, the replacement project required close collaboration among multiple service companies, and it was completed ahead of schedule and under budget.

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### About T.D. Williamson

Drawing upon a 95-year history of industry leadership, TDW is a global solutions provider for the owners and operators of pressurized piping systems. TDW delivers a comprehensive portfolio of solutions for onshore and offshore applications, including hot tapping and plugging, pipeline cleaning, integrity inspection, pigging, and non-tethered plugging pig technology.

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