TDW Helps Relieve Stress on Riser Offshore Malaysia

Comprehensive Pipeline Services Solution
Allows Preventive Measures to be Carried Out Safely

STAVANGER, Norway - March 26, 2014 – T.D. Williamson (TDW) announced that it recently completed a comprehensive pipeline services program for a major offshore operator to assist with efforts to relieve increasing contact stress between a gas export riser and platform jacket offshore East Malaysia.

Due to changes in seabed conditions, the platform jacket had moved, producing stress on the gas export riser attached to the platform jacket. The stress was most acute at the contact point between the bracings - or riser clamps - that anchor the riser to the platform structure. Concerned that the amount of stress developing at the contact point could eventually damage the riser, the operator decided that the best solution was to cut out and remove a section of the jacket bracing. Removal of the brace would not affect the technical integrity of the structure.

To ensure that the bracing could be safely removed from the pipeline, the customer requested TDW to isolate the affected section of the subsea line by inserting and setting a remotely-operated SmartPlug® isolation tool in the line approximately 100m from the platform. By doing so, only a short section of the pipeline had to be depressurized and isolated while the bracing was removed. The only alternative would have been to depressurise the entire pipeline, which would have been extremely time consuming and costly. Further complicating the situation was the fact that the line is tied in to another major pipeline that extends to a central riser complex. This line would have had to have been bled down as well, causing major disruption to overall production from the field.

Before the pipeline could be isolated, however, it became apparent that one of the topside motor-operated valves (MOVs) closest to the pig launcher would not open properly, so it would have to be replaced in order that the SmartPlug tool could reach the point of isolation. To rectify this, TDW performed a hot tap and STOPPLE® plug isolation on the line at a point located on the riser above the shutdown valve (SDV), thereby providing double-block isolation so that the operator could safely replace the malfunctioning MOV. Once the MOV was replaced, TDW launched the SmartPlug tool to the set location in order to isolate the line connected to the jacket bracing, which required a section removed. The line was isolated for five days, which allowed a diving contractor to safely remove the bracing without disrupting production. The SmartPlug tool was then unset and retrieved back to the launcher.
Unexpected situation demands full range of pipeline services

As a result of the unforeseen requirement to replace the MOV, the challenges faced by the customer grew significantly. TDW worked closely with the customer to make certain that, in spite of the MOV replacement, the bracing would be safely removed within the original timeframe. First, TDW manufactured a special custom fitting for the hot tap and STOPPLE plugging operation at its manufacturing plant in Tulsa, Oklahoma in a very short time. TDW then managed the entire operation, working closely with its teams in Norway, Belgium and Singapore, and collaborating with its network of trusted specialists to provide welding, and nitrogen and water pumping services. TDW performed all this in just four months.

“Our customer was faced with a unique and pressing challenge: to relieve the increasing stress on the riser by removing the subsea bracing, without disrupting production,” said Rolf Gunnar Lie, Business Development Manager – Asia Pacific for TDW. “The fact that a defective MOV prevented us from immediately isolating this line so that the bracing could be removed safely could have been a real setback, delaying this critical work for months. In addition to SmartPlug pressure isolation services, TDW has deep experience in hot tap and STOPPLE plugging services, so we were able to help solve this problem and move forward rapidly,” he added. TDW made it possible for the customer to extract the bracing, which alleviated the growing pressure on the riser, ensuring that it continues to operate safely.

TDW’s relationship with the operator dates back 12 years, supplying pipeline pressure isolation services to facilitate safe maintenance activities on export lines and pipeline tie-ins. This recent operation was executed as part of a framework agreement between the two companies, which was extended in 2012.

Construction works trigger increased demand for isolation services

With operators keen to protect live pipelines and maintain production while construction or repair works take place, TDW reports increased demand for its specialist pipeline isolation services, particularly in Asia Pacific. By isolating a designated section of a pipeline with its SmartPlug technology, customers avoid the trouble and expense of having to completely depressurize the entire line. In addition, the line can remain isolated for extended periods - months, if necessary - while work is carried out, or if work is delayed due to inclement weather or other extenuating circumstances.

About T.D. Williamson

T.D. Williamson is a world leader in pipeline equipment and services. The company delivers a comprehensive portfolio of safe integrity pipeline system solutions for onshore and offshore applications, including hot tapping and plugging, pipeline cleaning, integrity inspection, pigging and non-tethered plugging pig technology for any pressurized piping system, anywhere in the world.
Note to editors: Photos of the operations may be obtained by contacting Sharon Roe below.

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