

# COLFAX FLUID HANDLING RELIABILITY SERVICES DELIVERS BIG FOR OFFSHORE

## FAST, EFFICIENT PRECOMMISSIONING SERVICES KEY TO MEETING TIMELINE FOR TENSION LEG PLATFORM

### PROBLEM

Without properly flushing a new piping system, there is always risk of equipment failure at start-up that could lead to lost production. On an under construction Tension Leg Platform (TLP), the new piping system required a precommissioning flush to remove any debris that accumulated during construction. In this particular case, performing the flush itself was problematic – the current flushing program would not meet the customer cleanliness requirements within the precommissioning timelines, once again creating risk of lost production.

In August 2014, Colfax Fluid Handling Reliability Services was contracted to devise a plan to flush multiple new piping systems on this new TLP under construction in Texas.

### SOLUTION

To achieve customer specifications, CFH Reliability Services developed a flush plan utilizing multiple techniques in order to deliver a fast and clean flush that would meet critical timelines and cleanliness specifications. A team of four flushing crews was assembled, each with four technicians specialized in chemical cleaning, particulate water flushing and high velocity oil flushing. Each team was assigned to one of the complex piping systems on the platform. The systems included:

- Fuel gas, heat medium, cooling medium, man basket Hydraulic Power Unit (HPU) and tensioner HPUs
- Pipe sizes ranging from 2 - 18" ID for the fuel gas, heat medium and cooling medium piping systems
- Thousand foot systems that require hundreds of jumpers and variable speed flushing pumps capable of achieving up to 3,000 GPM



*TLP Under Construction*

Each piping system was chemically cleaned to remove all corrosion. A high velocity oil flush was then performed to remove particulates and meet mutually agreed upon cleanliness criteria. The man basket HPUs and tensioner HPUs in the well bay were chemically cleaned, particulate flushed, air blown, and high velocity oil flushed. The high velocity oil flushes were performed to NAS 5 standards and the water flush was done by visual bag inspection on 25 micron bags.

All service requirements were provided by Colfax Fluid Handling Reliability Services, including:

- Offshore Health, Safety and Environmental plan specific to over the water work
- Pressure tested and documented hose and equipment certification proving over the water suitability
- Highly detailed procedure for each system to be flushed and photo documentation proof of performance to be incorporated into each Project Summary report for each system.

## RESULTS

CFH Reliability Services' best-in-class equipment and highly trained, specialized technicians enabled the team to perform the precommissioning services 40 percent faster than incumbent service providers. CFH Reliability Services met all mutually agreed upon cleanliness criteria within the agreed upon timeframe and did so with zero injuries or incidents. This allowed the fabricator to meet their customer mandated delivery timeframe and decrease overall time needed to precommission the platform.



*BEFORE: Initial Flush Filtration Bag Inspection on Heat Medium Piping System*



*AFTER: Passing Bag on Heat Medium System*



*ICU 150 with 6 x 6 Centrifugal Pump on Deck*

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