

SPE 146124

Qualification of the Deepwater Subsea Well Intervention system “AX-S” for 10,000ft Operations

Abstract

This paper presents a detailed description of the technology qualification for the novel deepwater subsea well intervention equipment, the “AX-S™ system” developed by Expro AX-S Technology Ltd, and how the statement of feasibility of the project was developed and successfully achieved. Using the framework for technology qualification - Det Norske Veritas’ recommended practice “RP-A203: Qualification Procedures for New Technology”, DNV and Expro AX-S overcame a series of challenges to deliver the first project milestone (statement of feasibility) while ensuring that the project timeframe was not impeded. The Expro AX-S subsea well intervention system can operate in depths of up to 10,000 feet and negates the need for a drilling rig and riser systems, instead using remote intervention from a dedicated monohull vessel.

Introduction

The global demand for energy is increasing at a high rate, and the recovery of oil becoming more hazardous and challenging. Oil and gas production continues to move offshore and into increasingly deeper waters around the world, typically the Gulf of Mexico, Brazil and West Africa. The offshore industries have to become more efficient and meet the deepwater challenges by developing new solutions and bring them efficiently, safely and credibly to the market. However, the risk of introducing unproven technology can be very high and thus it is vital to prove that the innovation actually works as intended. DNV Recommended Practice “DNV-RP-A203” provides a recognised technology qualification (TQ) process to qualify new technology. It is a robust process, which considers each part of the new technology individually (and as a system) and qualifies it to the applicable industry standards.

DNV-RP-A203

DNV-RP-A203, “Qualification Procedures for New Technology”, provides a systematic approach to the qualification of new technology, and ensures that the technology qualified functions reliably within specified limits. The main steps in the qualification procedure are shown in Figure 1-1.
