## SUBSEA TECHNOLOGY Q&A



Figure 1. NGLS programme of work.



Figure 2. Subsea landing string assembly.

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## **Intervention operations**

With no specific standard relating to subsea well intervention equipment in place, the upcoming API 17G standard is intended to address this key area and provide robustness and integrity for landing strings. A committee of subsea matter experts have been formed, including representatives from Expro, to agree and deliver this new standard – driving the industry to recognise the importance of landing strings and their role in well integrity and their safety critical element in barrier philosophy.

In preparation for this, Expro has embarked upon a programme of work within its Next Generation Landing String (NGLS) projects, which meets the integrity, compliance and robustness demanded from API 17G.

The use of landing string technology will lower well commissioning and intervention costs, by minimising rig times and optimising rig utilisations through installing/completing in one run, improving efficiencies during operations for the operator.

- Functionality including enhanced functional capability of the valves. The enhancements, through compliance to the upcoming standard, improve the integrity of the equipment through meeting the vigorous validation requirements within the standard, which are applicable across all of Expro's products.
- Structural integrity/operability delivered through validation of finite element analysis against physical tests, will provide more accurate curves and improves structural and fatigue capacities. This in turn leads to improved operating windows and ability to perform in harsher environments.
- In riser monitoring system monitors the bend and tension that the subsea equipment is experiencing subsea, which is fed back into the global riser analysis to provide more accurate data to manage fatigue life.
- Safety integrity levels measures the amount of risk associated with safety related functions within the system.
- Life cycle management delivers a system that ensures equipment has the same integrity from installation through to the end of its operational lifespan.

Collectively, the NGLS programme of work ensures compliance with the upcoming API 17G standard, thereby reducing risk and enhancing safety.