

GENERAL SPECIFICATION

SUBSEA SYSTEMS

GS EP SPS 033

Subsea Intervention Tooling

02	10/2015	Drilling requirement included (new chapter 9)
01	10/2014	First revision (Contractors alignment comments included)
00	09/2013	First issue
Rev.	Date	Purpose of the revision

Owning entity: DSO/TEC	Managing entity: DSO/TEC/SBS
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1. Scope

This General Specification defines the functional requirements for the Remotely Operated Tooling (ROT) required to support the installation and operation of a Subsea Production Systems (SPS). This document also encompasses the work class Remotely Operated Vehicle (WROV) tooling required for intervention activities and the associated interfaces required to minimise WROV operation time.

This Specification covers common tooling types which are commonly used during the drilling & installation & construction and life of field.

This document specifies the minimum requirements.

2. Reference documents

The reference documents listed below form an integral part of this General Specification.

External Documents

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the effective date of this document.

Reference	Title
API RP 17H	Remotely Operated Vehicle Interfaces on Subsea Production Systems
API RP 17W	Recommended Practice for Subsea Capping Stacks
EN 12079 (Parts 1; 2; 3)	Offshore containers and associated lifting sets - Parts 1; 2; 3
SAE AS4059	Aerospace Fluid Power - Cleanliness Classification for Hydraulic Fluids

Total General Specifications

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published in the applicable yearly collection.

Reference	Title
GS EP SPS 001	Subsea Production Systems General Design Requirements
GS EP SPS 007	Subsea Connection Systems
GS EP SPS 027	WROV spread minimum requirements
GS EP FP 411	Subsea Horizontal Christmas Tree System
GS EP FP 413	Subsea vertical Dual Bore Christmas Tree

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3. Terms and Definitions

For the purpose of this document, the following terms and definitions apply:

‘Shall’	‘Shall’ is used to indicate requirements which are to be strictly followed in order to conform to the specification and acceptance by all parties.
‘Should’	‘Should’ is used to indicate that among several possibilities one is the recommended as particularly suitable without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required.
‘May’	‘May’ is used to indicate a course of action permissible within the limits of the specification. An optional course of action.
‘Can’	‘Can’ is used for statements of possibility and capability, whether material, physical or capable.
Company	TOTAL E&P.
Contractor	The Contractor(s) appointed by the Company for the supply of the equipment. Requirements of this Specification shall be enforced at all levels of the Contractor’s procurement process.

3.1 Abbreviated Terms

AHPU	Auxiliary Hydraulic Power Unit
BOP	Blowout Preventer
CITV	Chemical Injection Throttling Valve
CP	Cathodic Protection
DNV	Det Norske Veritas
DP	Dynamic Positioning
EFAT	Extended Factory Acceptance Test
EFL	Electrical Flying Lead
FAT	Factory Acceptance Test
FL	Flying Lead
FLOT	Flying Lead Orientation Tool
GA	General Arrangements
HFL	Hydraulic Flying Lead
HPU	Hydraulic Power Unit
LARS	Launch and Recovery System
LVOT	Linear Valve Override Tool
MBR	Minimum Bend Radius
MODU	Mobil Offshore Drilling Unit
MQC	Multi Quick Connect

MSV	Multi-Propose Support Vessel
NPT	National Pipe Thread
OFL	Optical Flying Lead
OMM	Operation and Maintenance Manual
PLR	Pig Launcher Receiver
PPS	Project Particular Specification
ROV	Remotely Operated Vehicle
RCU	Remote Control Unit
WOROV	Work class Remotely Operated Vehicle
ROT	Remote Operated Tool
SIT	System Integration Test
TDF	Telemetry Docking Frame
LOT	Lock Out / Open Tool

4. General Requirements

4.1 General

General subsea intervention tooling specification shall follow [API RP 17H](#) specification recommendations.

Specific tooling shall be required to include but not be limited to the following operations:

- ROT guidance and operation
- Connection and disconnection of tie-ins
- Manual operation of valves
- Override of actuated valves and chokes
- Hotstab interventions
- Seal replacement
- Pressure test operations
- Chemical / fluid injection
- Pig Launcher Receiver (PLR) installation, operation and recovery
- Chemical Injection Throttle Valve (CITV) replacement
- Cleaning with ambient seawater the subsea structures and facilities
- Flying lead (FL) installation
- Installation / change-out of subsea modules.