



Exploration & Production

GENERAL SPECIFICATION

SURVEYS

GS EP GEO 701

**Geotechnical data and foundation design
considerations for subsea production systems
and pipelines**

04	10/2009	Revision § 2 & 4.2
03	10/2006	Updated ISO references
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1. Scope

The purpose of this General Specification is to describe the requirements for:

- Acquisition and interpretation of specific site and soil data
- Geotechnical and foundation design considerations, applicable to both subsea production systems and pipelines.

This specification covers the following development structures:

- Subsea Production Systems (SPS), including both (a) individual well concept connected to a subsea manifold centre, or (b) multi-wells concept with production manifold
- Subsea water or gas injection structures
- Pre-drilling templates
- Pipelines and flow-lines, either rigid or flexible
- Associated foundation and support structures, e.g. spool pieces and mid-water arch anchor structures, etc.

This specification covers both permanently installed systems, as well as temporary equipment or structures possibly required for offshore site installation works.

The document is valid for all phases of an offshore field development, including site and soil investigation, design studies, construction, field installation and operation.

Deviations from any of the requirements defined herein shall be treated as non-conformances in accordance with COMPANY procedures.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

2.1 General

This specification is complementary to the following documents:

- **GS EP SPS 001** and **GS EP SPS 002** for subsea production systems
- **GS EP PLR 102** for pipelines
- **GS EP GEO 101** and **GS EP GEO 201** for site investigation equipment and procedures.

Therefore, this specification shall be read in conjunction with said documents and the other COMPANY specifications and standards identified herein.

The reference lists given in sections 2.2 and 2.3 only include general standards and professional documents where specific references have been made in this document. Unless otherwise stated in COMPANY Project requirements, the latest revision shall apply for all documents.

Standards

Reference	Title
ISO 13623	Petroleum and Natural Gas Industries - Pipeline Transportation Systems
ISO 13628	Petroleum and Natural Gas Industries - Design and Operation of Subsea Production Systems - Part 1: General Requirements and Recommendations - Part 2: Flexible Pipe Systems for Subsea and Marine Applications
ISO 19900-1	Petroleum and Natural Gas Industries - Offshore Structures - Part 1: General Requirements for Fixed Steel Structures
ISO 19901-4	Petroleum and Natural Gas Industries - Offshore Structures - Part 4: Geotechnical and Foundation Design Considerations

Professional Documents

Reference	Title
API RP 2A	Recommended Practice for Planning, Designing, and Constructing Fixed Structures
API RP 2N	Recommended Practice for Planning, Designing, and Constructing Pipelines in Arctic Conditions
API RP 17A	Recommended Practice for Design and Operation of Subsea Production Systems
BS 8010	Pipelines Subsea - Part 3: Design, Construction and Installation
DNV	Rules for Submarine Pipeline Systems (1981, 1996)

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
Not applicable	