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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21412.15-2017

**Petroleum and natural gas industries -- Design and operation of
subsea production systems -- Part 15: Subsea structures and
manifolds**

石油天然气工业 水下生产系统的设计和操作 第15部分：水下结构物及管汇
(English Translation)

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Foreword

GB/T 21412 "Design and operation of oil and gas industry underwater production system" is divided into 15 parts.

- Part 1. General requirements and recommended practices;
- Part 2. Non-bonded flexible pipe systems for the seabed and the sea;
- Part 3. Out of the pipeline (TFL) system;
- Part 4. Underwater wellhead equipment and Christmas tree equipment;
- Part 5. Underwater umbilical;
- Part 6. Underwater production control system;
- Part 7. Completion/workover riser systems;
- Part 8. Underwater vehicle (ROV) interface for subsea production systems;
- Part 9. Remote operation tool (ROT) maintenance system;
- Part 10. Cohesive flexible pipe specifications;
- Part 11. Flexible pipe systems for the seabed and the sea;
- Part 12. Dynamic production of legislation;
- Part 13. Underwater production system remote operation tools and interfaces;
- Part 14. Underwater high integrity pressure protection system;
- Part 15. Underwater structures and manifold.

This section GB/T 21412 Part 15.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method identical with ISO 13628-15:2011 "design and operation of oil and gas industry underwater production system Part 15. Underwater

structures and manifolds. " the documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

--- GB/T 12467.2-2009 Welding quality of metallic materials - Part 2. Complete quality requirements (ISO 3834-2:2005, IDT);

--- GB/T 19867 (all parts) welding procedure [ISO 15609 (all parts), IDT];

Oil and Gas Industry Drilling and Production Wellhead Equipment and Christmas Trees (ISO 10423).

2009, MOD);

--- GB/T 21412.1-2010 Design and operation of subsea production system for oil and gas industry - Part 1. General requirements and recommended practices (ISO 13628-1:2005, IDT);

--- GB/T 21412.8-2010 Design and operation of subsea production systems for oil and gas industry - Part 8. Underwater production System of underwater vehicle (ROV) interface (ISO 13628-8:2002, IDT).

This part of the National Oil and Gas Standardization Technical Committee (SAC/TC355) proposed and managed.

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Oil and gas industry Underwater production system design and operation Part 15.
Underwater structures and manifolds

1 Scope

GB/T 21412 of this part of the recognized and widely accepted within the framework of industrial norms and standards, put forward the underwater structure and manifold push Recommended practice. Therefore, it does not replace or exclude any requirement of other industry regulations.

This section applies to underwater oil and gas production and underwater injection pressure control of underwater manifolds and base plate. See examples of underwater production systems figure 1.

This section covers the following equipment.

a) Underwater production system structural components and piping systems.

--- Production and injection manifold;

--- Modular and integrated single satellite wells and multi-well base plate;

- Underwater treatment and underwater booster station;
- Oil (gas) riser base and the outer riser base (FRB, ERB);
- Pipeline terminal manifold (PLEM);
- Pipeline terminal (PLET);
- T-type and Y-type connection;
- Underwater isolation valve structure (SSIV).

b) underwater production system components.

- Underwater control and distribution structure;
- Other underwater structures.

c) Protective structures associated with the above equipment.

The following parts and their applications are beyond the scope of this section.

- Pipe and manifold valves;
- pipes and connectors;
- Grease mouth;
- Production control system.

General information related to the above may be obtained from other specifications such as 13628-1 and APISpec2C.