

ICS 75.180.10

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

**GB/T 44310-2024**

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**General design specifications for offshore fixed platform**

海上固定平台总体设计规范

**Issued on: August 23, 2024**

**Implemented on: March 1, 2025**

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**Issued by: State Administration for Market Regulation;  
Standardization Administration of the PRC**

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## Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed and coordinated by the National Technical Committee on Petroleum and Natural Gas Standardization (SAC/TC 355). This document was drafted by: CNOOC Research Institute Co., Ltd., Offshore Oil Engineering Co., Ltd., China National Petroleum Corporation Yang Engineering Co., Ltd. and Shenzhen COOEC Underwater Technology Co., Ltd. The main drafters of this document are: Shen Xiaopeng, Yu Chunjie, Xia Zhi, Yi Hualei, Xu Haibo, Sun Qin, Chang Wei, Sun Youyi, Wang Liqin, Gao Lei, Ba Yan, Li Qiang, Bai Lin, Jin Dan, Chen Zijiang, Guo Hua, Wang Yanping, Wan Guangfen, Liu Fei, Wu Lu, Lin Shouqiang, Liu Peilin, Wu Dahua, Wang Chaoyang, Chen Bangmin, Fu Dianfu, Wu Fei, Tan Yue, Lü Hang, Ci Hongsheng, Li Da, Shao Weidong, Yi Cong, Ma Weiwei.

General design specification for fixed offshore platforms

## 1 Scope

GB/T 44310-2024 is the Chinese general design specification for offshore fixed platforms, and it is an unusual standard in that it covers an entire installation across every engineering discipline in one document. It sets the general design requirements and then works through the general arrangement, that is where on the platform the wellheads, the processing area, the crude storage, the flare and cold vent booms, the utilities, the crane and cargo area, the muster area and lifeboats, the helideck and the living quarters are allowed to go relative to one another, which on an offshore platform is a safety decision before it is a layout decision. It then covers the process systems and the selection of process parameters, the fire fighting, escape and evacuation systems and the escape routes, the piping layout, materials, stress analysis and insulation, the mechanical equipment and the HVAC, the electrical system from load through supply and distribution to protection and cables, the instrumentation and control systems including the process control system, the emergency

shutdown system and the fire and gas detection system, the communications, the structure with its in-place static, seismic, fatigue, wave dynamic, pile foundation, on-bottom stability, construction and float-over analyses, the outfitting, and the corrosion protection. Separate requirements are given throughout for unmanned platforms. It applies to the design of steel fixed platforms at every stage, for new build, rebuild and extension projects.

This document specifies the overall design requirements for offshore fixed platforms, including general principles, general drawings, processes, fire and rescue escape systems, piping, machinery, etc. Mechanical, electrical, instrumentation and control systems, communications, structure, outfitting and anti-corrosion. This document is applicable to all design stages of new construction and renovation and expansion projects of steel fixed platforms, and can be used as a reference for other types of platforms.

## 2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 3836.5 Explosive atmospheres Part

## 5 Equipment protected by a pressurized enclosure "p"

GB/T 4208 Enclosure protection degree (IP code)

GB/T 12706 (all parts) Extruded insulation for power cables with rated voltages from 1 kV (Um=

1.2 kV) to 35 kV (Um=

40.5 kV) Cables and accessories

GB/T 14285 Technical specification for relay protection and safety automatic devices

GB/T 14549 Power quality - Harmonics in public power grids

GB/T 15145 General technical requirements for transmission line protection devices

GB 17167 General rules for the allocation and management of energy metering instruments in energy-consuming units

GB/T 18570.3 Surface preparation of steel before coating - Tests for assessment of surface cleanliness - Part

3.Steel before coating Dust assessment on surfaces (pressure-sensitive adhesive tape method)