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

GB/T 35988-2018

**Cathodic protection of offshore pipeline in petroleum, natural
gas industries**

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3.1 Terms and Definitions

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafted reference to ISO 15589-2:2012 "The Cathode Protection of Submarine Pipeline Transportation System in the Petroleum, Petrochemical and Natural Gas Industry.

Protection of Part 2. Submarine Pipelines, prepared in accordance with ISO 15589-2:2012, is non-equivalent.

This standard is proposed and managed by the National Oil and Gas Standardization Technical Committee (SAC/TC355).

This standard was drafted by. CNOOC Research Institute.

1 Scope

This standard specifies the pre-investigation, design, materials, equipment, manufacture, and installation of the cathodic protection system for the submarine pipelines in the petrochemical and natural gas industries.

Technical requirements and recommended practices for commissioning, operation, inspection and maintenance.

This standard is applicable to the design and renovation of carbon steel pipes, stainless steel pipes, flexible pipes and riser sections below the average water level in seawater or seabed.

And repair.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 1499.1 Steel for reinforced concrete - Part 1. Hot-rolled polished steel bar

GB/T 8923.1 Preparation of steel before application of paint. Visual assessment of surface cleanliness. Part 1. Uncoated steel

Corrosion grades and treatment levels of steel surfaces after surface and full removal of the original coating

GB/T 13912 Technical requirements and test methods for hot-dip galvanized steel parts of metal-clad steel parts

GB/T 15169 steel melt welding welder skills assessment

GB/T 17848 sacrificial anode electrochemical performance test method

GB/T 19866 Welding Procedure Specification and General Principles of Evaluation

GB/T 21448 Technical Specification for Cathodic Protection of Buried Steel Pipes

GB 50661 steel structure welding specification

3.1 Terms and Definitions

The following terms and definitions as defined in GB/T 21448 apply to this document. For ease of use, the following repeatedly lists the GB/T 21448

Some of the terms and definitions.

3.1.1

Anode potential anodedepotential

The voltage measured at the external circuit between the anode and the reference electrode in contact with the same electrolyte.

3.1.2

Anode stack anodesled

A sacrificial anode assembly that is mounted directly on the structure or connected to the pipeline by a cable.

3.1.3

Anode Closed Circuit Potential closed-circuitanodepotential

The potential at which the anode is electrically connected to the protected pipe.

3.1.4

Coating breakdown factor

The ratio of the polarization current density of the steel coating surface to the bare steel surface.

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