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**Corrosion of metals and alloys - Cathodic protection of
offshore wind structures
(English Translation)**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document adopts ISO 24656:2022 "Cathode protection of offshore wind structures".

The following minimal editorial changes have been made to this document.

---The standard title has been changed to "Cathodic Protection of Offshore Wind Energy Structures from Corrosion of Metals and Alloys".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Iron and Steel Association.

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Introduction

Cathodic protection (CP) can be used in conjunction with protective coatings to protect the submerged outer surfaces of offshore wind farm structures and appurtenances from seawater or marine environments.

Corrosion in the bottom environment.

Cathodic protection, along with protective coatings, can be used to protect internally submerged surfaces exposed to the seabed and sediments from corrosion.

ISO 12473 details the general principles of cathodic protection in seawater.

Cathodic protection involves providing sufficient direct current to the surface of a structure to reduce the potential of the steel to a value where corrosion is negligible or low.

Cathodic protection is designed to protect the entire submerged area and the muddy area of a structure from corrosion. The parts not submerged in water are not affected by the cathodic protection system.

Protect.

This document provides guidelines for the use of existing marine meteorological data.

---Assess the cathodic protection requirements for surfaces in the fully immersed and normally humid areas;

---Determine the seawater flow velocity to evaluate cathodic protection design parameters.

This complements the primary use of marine meteorological data in structural design.

This document does not require cathodic protection designers to be experts in marine meteorological data; it provides the necessary information for the cathodic protection design process.

A guide to the application of data obtained from marine meteorological experts.

Corrosion of metals and alloys Cathodic protection of offshore wind energy structures

1 Scope

This document specifies the requirements for external and internal cathodic protection of offshore wind farm structures, applicable to structures in contact with seawater or seabed environments.

and its accessories.

This document relates to.

---Design and implementation of cathodic protection systems for new steel structures;