



**SLOVENSKI STANDARD
SIST EN ISO 15589-2:2024**

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Oil and gas industries including lower carbon energy - Cathodic protection of pipeline transportation systems - Part 2: Offshore pipelines (ISO 15589-2:2024)

Öl- und Gasindustrie einschließlich kohlenstoffarmer Energieträger - Kathodischer Schutz für Transportleitungssysteme - Teil 2: Offshore-Pipelines (ISO 15589-2:2024)

Industries du pétrole et du gaz y compris les énergies à faible teneur en carbone - Protection cathodique des systèmes de transport par conduites - Partie 2: Conduites en mer (ISO 15589-2:2024)

Ta slovenski standard je istoveten z: EN ISO 15589-2:2024

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75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment
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NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2024

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Oil and gas industries including lower carbon energy -
Cathodic protection of pipeline transportation systems -
Part 2: Offshore pipelines (ISO 15589-2:2024)

Industries du pétrole et du gaz y compris les énergies à
faible teneur en carbone - Protection cathodique des
systèmes de transport par conduites - Partie 2:
Conduites en mer (ISO 15589-2:2024)

Öl- und Gasindustrie einschließlich kohlenstoffarmer
Energieträger - Kathodischer Schutz für
Transportleitungssysteme - Teil 2: Offshore-Pipelines
(ISO 15589-2:2024)

This European Standard was approved by CEN on 15 January 2024.

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European foreword

This document (EN ISO 15589-2:2024) has been prepared by Technical Committee ISO/TC 67 "Oil and gas industries including lower carbon energy" in collaboration with Technical Committee CEN/TC 219 "Cathodic protection" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2024, and conflicting national standards shall be withdrawn at the latest by August 2024.

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International Standard

ISO 15589-2

Oil and gas industries including lower carbon energy — Cathodic protection of pipeline transportation systems —

Part 2: Offshore pipelines

Industries du pétrole et du gaz y compris les énergies à faible teneur en carbone — Protection cathodique des systèmes de transport par conduites —

Partie 2: Conduites en mer

**Third edition
2024-02**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 67, *Oil and gas industries including lower carbon energy*, Subcommittee SC 2, *Pipeline transportation systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 219, *Cathodic protection*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 15589-2:2012), which has been technically revised.

The main changes are as follows:

- in [Clause 6](#), recommendations for isolating joints have been expanded;
- in [Clause 7](#), NOTES to [Table 1](#) and text in [7.4](#) have been updated to avoid discrepancies with [Figure 2](#); coating breakdown factors have been revised for errors left in the previous edition and less conservative values for some coating systems have been selected based on feedback from the industry;
- in [Clause 8](#), NOTES and guidance on the design of the system have been updated including recommendations for buried pipelines; anode utilization factors have been expanded to cover additional anodes types;
- in [Clause 9](#), [Table 6](#) has been updated to reflect anode compositions in line with current industry practices and other standards;
- in [Clause 10](#), additional references have been provided for guidance on core dimensions and position as well as testing for quality control of anode electrochemical properties;
- in [Annex A](#), additional anode resistance formulae have been provided to cover different anode types.
- [Annex B](#) has been modified to present the NORSOK method as a requirement, with an alternative method given for information.
- [Annex C](#) has been updated as informative and the test method replaced with references to current test methods in line with current industry practice.

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- The previous Annex E has been removed and replaced by additional guidance on quality control testing of anodes in [10.10](#).
- In the updated [Annex E](#) (Interference), additional references for alternating current interference have been added.

A list of all parts in the ISO 15589 series can be found on the ISO website.

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ISO 15589-2:2024(en)**Introduction**

Pipeline cathodic protection is achieved by the supply of sufficient direct current to the external pipe surface, so that the steel-to-electrolyte potential is lowered on all the surface to values at which external corrosion is reduced to an insignificant rate.

Cathodic protection is normally used in combination with a suitable protective coating system to protect the external surfaces of steel pipelines from corrosion.

This document can also be used for offshore pipelines outside the petroleum, petrochemical and natural gas industries.

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