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

GB/T 19285-2026

Replacing GB/T 19285-2014

Inspection of corrosion protection for buried steel pipelines

埋地钢质管道腐蚀防护工程检验

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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 replaces GB/T 19285-2014 "Inspection of Corrosion Protection Engineering for Buried Steel Pipelines" and is consistent with GB/T 19285-2014. Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows:

a) The scope has been changed to "external corrosion protection for buried steel pipelines on land," applicable to "construction period inspection, operation inspection, and maintenance." Periodic inspection (see Chapter 1, Chapter 1 of the.2014 edition);

b) The terms "electrode potential," "corrosion potential," "external anti-corrosion coating," "cathode protection," "sacrificial anode," "forced current," and "packing material" have been deleted. "Auxiliary anode", "Test pile", "Polarization potential", "Maximum protection potential", "Minimum protection potential", "Leak point", "Damage point", "Soil surface" "Potential gradient", "DC interference drainage protection", "AC interference protection", "pipeline AC interference voltage", "AC current density" and their settings Meaning (see sections 3.1.3, 3.1.4, 3.1.7~3.1.11, 3.1.13, 3.1.14, 3.1.17~3.1.19, 3.1.24,

3.1.25 of the.2014 edition) Articles

3.1.33 to 3.1.35, 3.1.37, and

3.1.38 have changed the terms "sacrificial anode closed-circuit potential (operating potential)" and "sacrificial anode open-circuit potential". The name of "position" (see 3.1.13, 3.1.14,

3.1.21 in the.2014 edition) has been changed, and the terms "inspection piece" and "AC current decay" have been modified. The English equivalent of "subtraction" (see 3.1.6,

3.1.7,

3.1.26 in the 2014 edition) has been changed, along with the terms "power-off potential" and "corrosion potential". "Corrosion-active region", "pipe-to-soil potential", "AC potential gradient method", "AC interference", "current-carrying potential", "soil resistivity", "redox potential", "Potential", "stray current", "DC potential gradient method", "DC interference", "natural corrosion potential", "IR drop" and their definitions (see 3.1.3~ Versions 3.1.5, 3.1.8, 3.1.9, 3.1.11, 3.1.12, 3.1.15~3.1.20, and versions 3.1.1, 3.1.2, 3.1.5, 3.1.6, and

3.1.16 of the 2014 edition. Sections 3.1.22, 3.1.23, 3.1.28~3.1.32, and

3.1.36 added the term "Analytic Hierarchy Process" and its definition (see 3.1.2).

c) The abbreviation "3LPE" has been removed (see 3.2, 2014 edition);

d) Added basic regulations, including requirements for different stages of inspection of corrosion protection systems for buried steel pipelines, methods for dividing pipe sections, and other necessary procedures. The circumstances under which the inspection is conducted, as well as related content such as data alignment, communication mechanisms, health, safety and environmental protection, equipment and instruments (see section [number]). (4 chapters)

e) The inspection of external anti-corrosion coatings and cathodic protection systems during the construction period has been revised (see Chapter 5, Chapter 5 and Chapter 6 of the 2014 edition). Chapter 6);

1 Scope

GB/T 19285-2026 is the Chinese national standard covering checking that a buried pipeline's corrosion protection actually works - the coating holiday detection before backfill, the cathodic protection potentials measured along the route, the above-ground surveys that find coating damage without digging, and the interference from other buried structures. At 42,000 words it replaces GB/T 19285-2014, and it is the practical companion of the integrity standards GB/T 47764-2026 and GB/T 27512-2025. It was issued on 28 January 2026 and has been in force since 1 May 2026, replacing GB/T 19285-2014. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the basic requirements for the quality and corrosion protection effectiveness inspection of onshore buried steel pipeline external corrosion protection projects. This document applies to the construction period inspection, operation inspection and periodic inspection of onshore buried steel pipeline external corrosion protection projects.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 11032 AC gapless metal oxide surge arresters

GB/T 21447 Standard for External Corrosion Control of Steel Pipelines

GB/T 30582 Risk-based inspection and evaluation of external damage to buried steel pipelines

GB 50423 Code for Design of Oil and Gas Pipeline Crossing Projects

GB/T 50538 Technical Standard for Anti-corrosion and Thermal Insulation Layers of Buried Steel Pipelines

GB/T 51241 Technical Specification for External Corrosion Protection and Repair of Pipelines SY/T 0029 Technical Specification for Application of Buried Steel Inspection Plates

3 Terms, Definitions and Abbreviations

3.1 Terms and Definitions The following terms and definitions apply to this document.

3.1.1 Reference electrode An electrode with a stable and reproducible potential in moist soil is used as a reference when testing the potential values of other electrodes.

3.1.2 Systems analysis and decision-making methods decompose complex problems into multiple levels and factors, determine the relative importance of each factor, and construct... A hierarchical model is constructed to provide a scientific basis for decision-making, and it is applicable to complex decision-making problems with multiple objectives and multiple criteria.

3.1.3 Offpotential To test the ground potential without an IR dropper, the potential of the pipeline to the electrolyte (soil) is measured instantaneously after a short delay following a interruption of the loop current.

3.1.4 Corrosion activity in the corrosion active region Locations on pipelines where external corrosion is prone to occur, frequently occurs, and continues to happen.

3.1.5 The potential difference between the pipeline and its adjacent electrolyte (soil).