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Second edition
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Petroleum, petrochemical and natural gas industries — Cathodic protection of pipeline systems —

Part 1: On-land pipelines

*Industries du pétrole, de la pétrochimie et du gaz naturel —
Protection cathodique des systèmes de transport par conduites —
Partie 1: Conduites terrestres*



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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 documents 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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 2, *Pipeline transportation systems*.

This second edition cancels and replaces the first edition (ISO 15589-1:2003), which has been technically revised with the following changes:

- cathodic protection criteria have been extended with further clarification on the application of the criteria;
- requirements for design have been more detailed and periodicities for inspection of cathodic equipment have been enlarged, and the option for remote monitoring added;
- requirements for measurements and testing during commissioning have been further detailed.

ISO 15589 consists of the following parts, under the general title *Petroleum, petrochemical and natural gas industries — Cathodic protection of pipeline systems*:

- *Part 1: On-land pipelines*
- *Part 2: Offshore pipelines*

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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 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.

It is necessary that users of this part of ISO 15589 be aware that further or differing requirements can be needed for individual applications. This part of ISO 15589 is not intended to inhibit the use of alternative equipment or engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. It is necessary that, where an alternative is offered, any variations from this part of ISO 15589 be identified and documented.