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Oil and gas industries including lower carbon energy — Equipment for well cementing —

Part 1: Casing bow-spring centralizers

Industries du pétrole et du gaz, y compris les énergies à faible teneur en carbone — Équipement de cimentation de puits —

Partie 1: Centreurs de tubes de cuvelage

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Foreword

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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 3, *Drilling and completion fluids, well cements and treatment fluids,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 12, *Oil and gas industries including lower carbon energy,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 10427-1:2001), which has been technically revised.

This document supplements API Spec 10D, 7th edition (2021).

The technical requirements of this document and API Spec 10D used to be identical. In the meantime, API Spec 10D has been technically revised as API Spec 10D, 7th edition (2021). The purpose of this edition of ISO 10427-1 is to bring it up to date, by referencing the current edition of API Spec 10D and including supplementary content.

The main changes compared to the previous edition are as follows:

— specification for the use of an unpainted centralizer in the running force test;

— specification for compensation of mass in the running force test;

— measurement of the centralizer maximum diameter after open hole test;

— definition of centralizer rigid OD;

— specification for the order of test.

A list of all parts in the ISO 10427 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Oil and gas industries including lower carbon energy — Equipment for well cementing —

Part 1: Casing bow-spring centralizers

1 Scope

This document specifies testing, performance, and marking requirements for casing bow-spring centralizers to be used in oil and natural gas well construction. The procedures give guidance on verification testing for the manufacturer's design, materials, and process specifications, and periodic testing to confirm the consistency of product performance. This specification is not applicable to other devices, such as rigid centralizers and cement baskets, or bow-spring centralizers used for other purposes (e.g., wireline tools, gravel pack, inner string).

This document is a supplement to API Spec 10D 7th edition (2021), the requirements of which are applicable with the exceptions specified in this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Spec 10D, *7th edition (2021), Casing Bow-spring Centralizers*

3 Terms, definitions and abbrevaited terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in API Spec 10D 7th edition (2021) and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1.1
centralizer rigid OD
maximum OD of the centralizer or end collars when the bows are flat

3.1.2
coating
application of a thin film of one material on the surface of another material for various purposes

Note 1 to entry: Paint is a form of coating.

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