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Petroleum and natural gas industries — Ceramic lined tubing

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Foreword

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This document was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 5, *Casing, tubing and drill pipe*.

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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Introduction

Users of this document should be aware that further or differing requirements can be needed for individual applications. This document is not intended to inhibit a manufacturer from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. Where an alternative is offered, it is the responsibility of the manufacturer to identify and provide details of any variations from this document.

In this document, the following verbal forms are used:

— “shall” indicates a requirement;

— “should” indicates a recommendation;

— “can” indicates a possibility or a capability;

— “may” indicates a permission.

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Petroleum and natural gas industries — Ceramic lined tubing

1 Scope

This document specifies requirements for ceramic lined tubing (CLT) used in the petroleum and natural gas industries, including configuration and materials, manufacturing, inspection and testing, marking, packaging, transportation, and storage.

This document is applicable to CLT manufactured by centrifugal self-propagating high-temperature synthesis.

The applicable outside diameter of CLT ranges from 42,16 mm (1,66 inch) to 114,3 mm (4-1/2 inch). The steel grades include H40, J55, and N80 type 1.

NOTE Applicability of this document to other sizes and higher steel grades can be by agreement between the manufacturer and the purchaser.

CLT is suitable for extracting multiphase fluid, hydrocarbon gas, hydrocarbon liquid, and water under corrosive, abrasive, wax deposition, scaling, and high temperature environments.

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.

ISO 2819, *Metallic coatings on metallic substrates — Electrodeposited and chemically deposited coatings — Review of methods available for testing adhesion*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 8501-1, *Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness — Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings*

ISO 10405, *Petroleum and natural gas industries — Care and use of casing and tubing*

ISO 11960, *Petroleum and natural gas industries — Steel pipes for use as casing or tubing for wells*

ISO 14705, *Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for hardness of monolithic ceramics at room temperature*

ISO 15156-2, *Petroleum and natural gas industries — Materials for use in H2S-containing environments in oil and gas production — Part 2: Cracking-resistant carbon and low-alloy steels, and the use of cast irons*

ISO 21714, *Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for determining density of ceramic coatings*

ISO 23936-1, *Petroleum, petrochemical and natural gas industries — Non-metallic materials in contact with media related to oil and gas production — Part 1: Thermoplastics*

API Spec 5B, *Specification for Threading, Gauging, and Thread Inspection of Casing, Tubing, and Line Pipe Threads*

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