SLOVENSKI STANDARD
oSIST prEN ISO 10423:2021

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Industrija za predelavo nafte in zemeljskega plina - Vrtalna in proizvodna oprema - Oprema za glavo izvrtine in erupcijski križ na ustjih vrtin

Petroleum and natural gas industries - Drilling and production equipment - Wellhead and christmas tree equipment

Erdöl- und Erdgasindustrie - Bohr- und Förderausrüstung - Bohrlochkopf- und Eruptionskreuz-Ausrüstung

Industries du pétrole et du gaz naturel - Équipement de forage et de production - Équipement pour têtes de puits et arbre de Noël

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75.180.10	Oprema za raziskovanje, vrtanje in odkopavanje	Exploratory, drilling and extraction equipment

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 67 *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 4 *Drilling and production equipment*.

This fifth edition cancels and replaces the fourth edition (ISO 10423:2009), which has been technically revised.

This document supplements API Spec 6A, 21st edition (2018).

The technical requirements of this document and API Spec 6A, used to be identical. In the meantime API Spec 6A has been technically revised as API Spec 6A, 21st edition (2018). The purpose of this edition of ISO 10423 is to bring it up to date, by referencing the current edition of API Spec 6A and including supplementary content.

The main change compared to the previous edition of ISO 10423 is issuing this document as a supplemental standard to API Spec 6A, 21st edition (2018).

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.

Introduction

Users of this document are informed that further or differing requirements can be needed for individual applications. This document is not intended to inhibit a vendor from offering, or the purchaser 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, the vendor needs to identify any variations from this document and provide details.

Petroleum and natural gas industries — Drilling and production equipment — Wellhead and tree equipment

1 Scope

This document identifies requirements and gives recommendations for the performance, dimensional and functional interchangeability, design, materials, testing, inspection, welding, marking, handling, storing, shipment, and purchasing of wellhead and tree equipment for use in the petroleum and natural gas industries.

This document does not apply to field use or field testing. This document also does not apply to repair of wellhead and tree equipment except for weld repair in conjunction with manufacturing. Tools used for installation and service (e.g. running tools, test tools, wash tools, wear bushings, and lubricators) are outside the scope of this document.

This document supplements API Spec 6A, 21st edition, 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 6A, *21st edition (2018), Specification for Wellhead and Tree Equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in API Spec 6A, 21st edition (2018) apply.

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

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

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

4 Supplements to API Spec 6A, 21st edition (2018)

4.1 General requirements

The requirements specified in API Spec 6A, 21st edition (2018) shall apply, with the additions and exceptions specified in 4.2 to 4.5.

4.2 Closure bolting

The requirements specified in API Spec 6A, 21st edition (2018), 8.1 apply with the following exceptions.

The manufacturer shall install closure bolting in accordance with their documented specifications.

4.3 Fittings and pressure boundary penetrations

The requirements specified in API Spec 6A, 21st edition (2018), 9.3 apply with the following exceptions.

The manufacturer shall install fittings in test and gauge connector ports in accordance with their documented specifications.

4.4 Wellhead equipment data sheet – General

The requirements specified in API Spec 6A, 21st edition (2018), Figure B.1 apply with the following addition.

Joules-Thomson cooling with gas flowing through chokes and/or partially closed valves can lead to temperatures significantly below the identified minimum ambient temperature and can require a minimum temperature rating of the equipment below the ambient temperature.

4.5 Typical wellhead and tree configurations

The requirements specified in API Spec 6A, 21st edition (2018), B.3 apply with the following exceptions.

Figures B.13 and B.14 show typical minimum configurations appropriate for wells with no requirements for additional barriers. Many wells will have additional valves, which are not shown in these figures, to provide barriers for situations, such as equipment failure, sustained casing pressure and/or artificial lift.