

Specification for Drill Pipe

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 11961 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*.

This second edition cancels and replaces the first edition (ISO 11961:1996), which has been extensively technically revised.

It is the intention of ISO/TC 67 that either this edition or the previous edition of ISO 11961 be applicable, at the option of the purchaser (as defined in 4.1.31), for a period of six months from the first day of the calendar quarter immediately following the date of publication of this edition, after which period the previous edition will no longer be applicable.

Introduction

This International Standard is based on API Spec 5D and API Spec 7.

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

This International Standard includes provisions of various natures. These are identified by the use of certain verbal forms:

- a) SHALL is used to indicate that a provision is MANDATORY;
- b) SHOULD is used to indicate that a provision is not mandatory, but RECOMMENDED as good practice;
- c) MAY is used to indicate that a provision is OPTIONAL.

Petroleum and natural gas industries — Steel drill pipe

1 Scope

This International Standard specifies the technical delivery conditions for steel drill-pipes with upset pipe-body ends and weld-on tool joints for use in drilling and production operations in petroleum and natural gas industries for three product specification levels (PSL-1, PSL-2 and PSL-3). The requirements for PSL-1 form the basis of this International Standard. The requirements that define different levels of standard technical requirements for PSL-2 and PSL-3 are in Annex G.

This International Standard covers the following grades of drill-pipe:

- grade E drill-pipe;
- high-strength grades of drill-pipe, grades X, G and S.

A typical drill-pipe configuration is given, showing main elements and lengths (see Figure B.1). The main dimensions and masses of the grades of drill-pipe are given in both SI units (see Table A.1) and in USC units (see Table C.1).

This International Standard can also be used for drill-pipe with tool joints not specified by ISO or API standards.

By agreement between purchaser and manufacturer, this International Standard can also be applied to other drill-pipe body and/or tool-joint dimensions. This International Standard lists supplementary requirements that can optionally be agreed between purchaser and manufacturer, for testing, performance verification and non-destructive examination (see Annex E).

This International Standard does not consider performance properties.

NOTE 1 In this International Standard, drill-pipe is designated by label 1, label 2, grade of material (E, X, G and S), upset type and type of rotary shouldered connection. Designations are used for the purpose of identification in ordering.

NOTE 2 Reference can be made to ISO 10424-2 or API Spec 7-2 for the detailed requirements for the threading of drill-pipe tool joints.

NOTE 3 Reference can be made to API RP 7G for the performance properties of the drill-pipe.

2 Conformance

2.1 Dual citing of normative references

In the interests of world-wide application of this International Standard, Technical Committee ISO/TC 67 has decided, after detailed technical analysis, that certain of the normative documents listed in Clause 3 and prepared by ISO/TC 67 or another ISO Technical Committee are interchangeable in the context of the relevant requirement with the relevant document prepared by the American Petroleum Institute (API), the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI). These latter documents are cited in the running text following the ISO reference and preceded by “or”, for example “ISO XXXX or API YYYY”. Application of an alternative normative document cited in this manner will lead to technical results different from the use of the preceding ISO reference. However, both results are acceptable and these documents are thus considered interchangeable in practice.