INTERNATIONAL STANDARD

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Steel flat products for pressure purposes — Technical delivery conditions —

Part 1: General requirements

Produits plats en acier pour service sous pression — Conditions techniques de livraison —

Partie 1: Exigences générales

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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 on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 10, *Steel for pressure purposes*.

This fourth edition cancels and replaces the third edition (ISO 9328-1:2011), which has been technically revised. The following changes have been made:

— all designations concerning thickness have been changed to "nominal thickness";

— the thickness for test pieces for impact testing has been increased to 12 mm throughout;

— some references have been moved to the Bibliography;

— the content of the document has been generally updated.

A list of all the parts in the ISO 9328 series can be found on the ISO website.

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Steel flat products for pressure purposes — Technical delivery conditions —

Part 1: General requirements

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1 Scope

This document specifies the general technical delivery conditions for steel flat products (plate/sheet and strip) used principally for the construction of pressure equipment.

The general technical delivery requirements of ISO 404 also apply to products supplied in accordance with 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.

ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

ISO 377, *Steel and steel products — Location and preparation of samples and test pieces for mechanical testing*

ISO 404, *Steel and steel products — General technical delivery requirements*

ISO 2566-1, *Steel — Conversion of elongation values — Part 1: Carbon and low alloy steels*

ISO 2566-2, *Steel — Conversion of elongation values — Part 2: Austenitic steels*

ISO 3651-2, *Determination of resistance to intergranular corrosion of stainless steels — Part 2: Ferritic,austenitic and ferritic-austenitic (duplex) stainless steels — Corrosion test in media containing sulfuric acid*

ISO 4885, *Ferrous products — Heat treatments — Vocabulary*

ISO 4948-1, *Steels — Classification — Part 1: Classification of steels into unalloyed and alloy steels based on chemical composition*

ISO 4948-2, *Steels — Classification — Part 2: Classification of unalloyed and alloy steels according to main quality classes and main property or application characteristics*

ISO/TS 4949, *Steel names based on letter symbols*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 6892-2, *Metallic materials — Tensile testing — Part 2: Method of test at elevated temperature*

ISO 6929, *Steel products — Vocabulary*

ISO 7452, *Hot-rolled steel plates — Tolerances on dimensions and shape*

ISO 7778, *Through-thickness characteristics for steel products*

ISO 7788, *Steel — Surface finish of hot-rolled plates and wide flats — Delivery requirements*

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ISO 9034, *Hot-rolled structural steel wide flats — Tolerances on dimensions and shape*

ISO 9328-2:2018, *Steel flat products for pressure purposes — Technical delivery conditions — Part 2: Non-alloy and alloy steels with specified elevated temperature properties*

ISO 9328-3, *Steel flat products for pressure purposes — Technical delivery conditions — Part 3: Weldable fine grain steels, normalized*

ISO 9328-4, *Steel flat products for pressure purposes — Technical delivery conditions — Part 4: Nickel-alloy steels with specified low temperature properties*

ISO 9328-5, *Steel flat products for pressure purposes — Technical delivery conditions — Part 5: Weldable fine grain steels, thermomechanically rolled*

ISO 9328-6, *Steel flat products for pressure purposes — Technical delivery conditions — Part 6: Weldable fine grain steels, quenched and tempered*

ISO 9328-7, *Steel flat products for pressure purposes — Technical delivery conditions — Part 7: Stainless steels*

ISO 9444-1, *Continuously hot-rolled stainless steel — Tolerances on dimensions and form — Part 1: Narrow strip and cut lengths*

ISO 9444-2, *Continuously hot-rolled stainless steel — Tolerances on dimensions and form — Part 2: Wide strip and sheet/plate*

ISO 9445-1, *Continuously cold-rolled stainless steel — Tolerances on dimensions and form — Part 1: Narrow strip and cut lengths*

ISO 9445-2, *Continuously cold-rolled stainless steel — Tolerances on dimensions and form — Part 2: Wide strip and plate/sheet*

ISO 10474, *Steel and steel products — Inspection documents*

ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition*

ISO 17577, *Steel — Ultrasonic testing of steel flat products of thickness equal to or greater than 6 mm*

ISO 18286, *Hot-rolled stainless steel plates — Tolerances on dimensions and shape*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4885, ISO 4948-1, ISO 4948-2 and ISO 6929 and the following apply.

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

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

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

NOTE 1 In addition to the definitions for thermomechanical treatment and quenching and tempering in ISO 4885, the following is noted:

a) thermomechanical rolling (symbol M) can include processes of increased cooling rates with or without tempering, including self-tempering but definitively excluding direct quenching and tempering;

b) quenching and tempering (symbol QT) also includes direct quenching plus tempering.

NOTE 2 In international publications, for normalizing rolling and thermomechanical rolling the expression "controlled rolling" can be found. However, in view of the different applications of the products, it is necessary to make a distinction between the terms.

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