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Seamless steel tubes for pressure purposes - Technical delivery conditions - Part 5: Stainless steel tubes

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/21

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Seamless steel tubes for pressure purposes - Technical delivery conditions - Part 5: Stainless steel tubes

Tubes sans soudure pour service sous pression -
 Conditions techniques de livraison - Partie 5 : Tubes en
 aciers inoxydables

Nahtlose Stahlrohre für Druckbeanspruchung -
 Technische Lieferbedingungen - Teil 5: Rohre aus
 nichtrostenden Stählen

This European Standard was approved by CEN on 12 March 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 10216-5:2021 (E)

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EN 10216-5:2021 (E)**European foreword**

This document (EN 10216-5:2021) has been prepared by Technical Committee CEN/TC 459/SC 10 “Steel tubes, and iron and steel fittings”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2021, and conflicting national standards shall be withdrawn at the latest by October 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 10216-5:2013.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2014/68/EU.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

The following changes have been made in comparison to the previous edition EN 10216-5:2013:

- a) the normative references have been updated;
- b) in Table 6 and Table 7, the footnote “a” has been completed;
- c) in 8.8, the dated reference of the standards has been deleted;
- d) in Table 15, the frequency of testing in test category 2 for tensile test at room temperature has been modified;
- e) the impact testing (11.4.1) has been modified;
- f) the standard has been editorially revised.

EN 10216 consists of the following parts, under the general title *Seamless steel tubes for pressure purposes – Technical delivery conditions*:

- *Part 1: Non-alloy steel tubes with specified room temperature properties;*
- *Part 2: Non-alloy and alloy steel tubes with specified elevated temperature properties;*
- *Part 3: Alloy fine grain steel tubes;*
- *Part 4: Non-alloy and alloy steel tubes with specified low temperature properties;*
- *Part 5: Stainless steel tubes (the present document).*

Another European Standard series covering tubes for pressure purposes is:

- EN 10217 series, *Welded steel tubes for pressure purposes – Technical delivery conditions.*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 10216-5:2021 (E)**1 Scope**

This document specifies the technical delivery conditions in two test categories for seamless tubes of a circular cross section made of austenitic (including creep resisting steel) and austenitic-ferritic stainless steel which are intended for pressure and corrosion resisting purposes at room temperature, at low temperatures or at elevated temperatures.

NOTE Once this document is published in the Official Journal of the European Union (OJEU) under Directive 2014/68/EC, presumption of conformity to the Essential Safety Requirements (ESR) of Directive 2014/68/EC is limited to technical data of materials in this document and does not presume adequacy of the material to a specific item of equipment. Consequently, the assessment of the technical data stated in this material standard against the design requirements of this specific item of equipment to verify that the ESRs of the Pressure Equipment Directive are satisfied will be done by the designer or manufacturer of the pressure equipment, taking also into account the subsequent manufacturing processes which could affect properties of the base materials.

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.

EN 10020:2000, *Definition and classification of grades of steel*

EN 10021:2006, *General technical delivery conditions for steel products*

EN 10027-1:2016, *Designation systems for steels - Part 1: Steel names*

EN 10027-2:2015, *Designation systems for steels - Part 2: Numerical system*

EN 10028-7:2016, *Flat products made of steels for pressure purposes - Part 7: Stainless steels*

EN 10088-1:2014, *Stainless steels - Part 1: List of stainless steels*

EN 10168:2004, *Steel products - Inspection documents - List of information and description*

EN 10204:2004, *Metallic products - Types of inspection documents*

EN 10266:2003, *Steel tubes, fittings and structural hollow sections - Symbols and definitions of terms for use in product standards*

CEN/TR 10261:2018, *Iron and steel - European standards for the determination of chemical composition*

EN ISO 148-1:2016, *Metallic materials - Charpy pendulum impact test - Part 1: Test method (ISO 148-1:2016)*

EN ISO 377:2017, *Steel and steel products - Location and preparation of samples and test pieces for mechanical testing (ISO 377:2017)*

EN ISO 643:2020, *Steels - Micrographic determination of the apparent grain size (ISO 643:2019, Corrected version 2020-03)*

EN ISO 1127:1996, *Stainless steel tubes - Dimensions, tolerances and conventional masses per unit length (ISO 1127:1992)*

EN ISO 2566-2:1999, *Steel - Conversion of elongation values - Part 2: Austenitic steels (ISO 2566-2:1984)*

EN ISO 3651-2:1998, *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 3651-2:1998)*

EN ISO 4885:2018, *Ferrous materials - Heat treatments - Vocabulary (ISO 4885:2018)*

EN ISO 6892-1:2019, *Metallic materials - Tensile testing - Part 1: Method of test at room temperature (ISO 6892-1:2019)*

EN ISO 6892-2:2018, *Metallic materials - Tensile testing - Part 2: Method of test at elevated temperature (ISO 6892-2:2018)*

EN ISO 8492:2013, *Metallic materials - Tube - Flattening test (ISO 8492:2013)*

EN ISO 8493:2004, *Metallic materials - Tube - Drift-expanding test (ISO 8493:1998)*

EN ISO 8495:2013, *Metallic materials - Tube - Ring-expanding test (ISO 8495:2013)*

EN ISO 8496:2013, *Metallic materials - Tube - Ring tensile test (ISO 8496:2013)*

EN ISO 10893-1:2011,¹ *Non-destructive testing of steel tubes - Part 1: Automated electromagnetic testing of seamless and welded (except submerged arc-welded) steel tubes for the verification of hydraulic leaktightness (ISO 10893-1:2011)*

EN ISO 10893-8:2011,² *Non-destructive testing of steel tubes - Part 8: Automated ultrasonic testing of seamless and welded steel tubes for the detection of laminar imperfections (ISO 10893-8:2011)*

EN ISO 10893-10:2011,³ *Non-destructive testing of steel tubes - Part 10: Automated full peripheral ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of longitudinal and/or transverse imperfections (ISO 10893-10:2011)*

EN ISO 14284:2002, *Steel and iron - Sampling and preparation of samples for the determination of chemical composition (ISO 14284:1996)*

ISO 11484:2019, *Steel products — Employer's qualification system for non-destructive testing (NDT) personnel*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

¹ As impacted by EN ISO 10893-1:2011/A1:2020.

² As impacted by EN ISO 10893-8:2011/A1:2020.

³ As impacted by EN ISO 10893-10:2011/A1:2020.