

TERASEST KEEVITATUD SURVETORUD. TEHNILISED
TARNETINGIMUSED. OSA 7: ROOSTEVABAST TERASEST
TORUD

Welded steel tubes for pressure purposes - Technical
delivery conditions - Part 7: Stainless steel tubes

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 10217-7:2021 sisaldab Euroopa standardi EN 10217-7:2021 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 21.04.2021.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 10217-7:2021 consists of the English text of the European standard EN 10217-7:2021.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 21.04.2021.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 23.040.10, 77.140.75

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EUROPEAN STANDARD

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NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 10217-7:2014

English Version

Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7: Stainless steel tubes

Tubes soudés en acier pour service sous pression -
Conditions techniques de livraison - Partie 7 : Tubes en
aciers inoxydables

Geschweißte Stahlrohre für Druckbeanspruchungen -
Technische Lieferbedingungen - Teil 7: Rohre aus
nichtrostenden Stählen

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

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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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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European foreword

This document (EN 10217-7:2021) 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 10217-7:2014.

The main changes with respect to the previous edition are listed in Annex A.

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 2014/68/EU, see informative Annex ZA, which is an integral part of this document.

EN 10217 consists of the following parts, under the general title *Welded steel tubes for pressure purposes — Technical delivery conditions*:

- *Part 1: Electric welded and submerged arc welded non-alloy steel tubes with specified room temperature properties;*
- *Part 2: Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties;*
- *Part 3: Electric welded and submerged arc welded alloy fine grain steel tubes with specified room, elevated and low temperature properties;*
- *Part 4: Electric welded non-alloy and alloy steel tubes with specified low temperature properties;*
- *Part 5: Submerged arc welded non-alloy and alloy steel tubes with specified elevated temperature properties;*
- *Part 6: Submerged arc welded non-alloy steel tubes with specified low temperature properties;*
- *Part 7: Stainless steel tubes.*

Another European Standard series covering tubes for pressure purposes is:

EN 10216, *Seamless steel tubes for pressure purposes.*

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.

1 Scope

This document specifies the technical delivery conditions in two test categories for welded tubes of circular cross-section made of austenitic 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 the reference of this document is published in the Official Journal of the European Union (OJEU) under Directive 2014/68/EU, pressure equipment directive, presumption of conformity to the Essential Safety Requirements (ESR) of Directive 2014/68/EU 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, needs to be done by the designer 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 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 5173:2010, *Destructive tests on welds in metallic materials - Bend tests (ISO 5173:2009)*

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 9712:2012, *Non-destructive testing - Qualification and certification of NDT personnel (ISO 9712:2012)*

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 10893-2:2011,² *Non-destructive testing of steel tubes - Part 2: Automated eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections (ISO 10893-2:2011)*

EN ISO 10893-6:2019, *Non-destructive testing of steel tubes - Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections (ISO 10893-6:2019)*

EN ISO 10893-7:2019, *Non-destructive testing of steel tubes - Part 7: Digital radiographic testing of the weld seam of welded steel tubes for the detection of imperfections (ISO 10893-7:2019)*

EN ISO 10893-8:2011,³ *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 10893-9:2011,⁴ *Non-destructive testing of steel tubes - Part 9: Automated ultrasonic testing for the detection of laminar imperfections in strip/plate used for the manufacture of welded steel tubes (ISO 10893-9:2011)*

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

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

³ As impacted by EN ISO 10893-8:2011/A1:2020.

⁴ As impacted by EN ISO 10893-9:2011/A1:2020.

EN ISO 10893-10:2011,⁵ *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 10893-11:2011,⁶ *Non-destructive testing of steel tubes - Part 11: Automated ultrasonic testing of the weld seam of welded steel tubes for the detection of longitudinal and/or transverse imperfections (ISO 10893-11:2011)*

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*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 10020:2000, EN 10021:2006, EN ISO 4885:2018 and EN 10266:2003 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>

3.1

test category

classification that indicates the extent and level of inspection and testing

3.2

employer

organization for which a person works on a regular basis

Note 1 to entry: The employer may be either the tube manufacturer or supplier or a third party organization providing non-destructive testing (NDT) services.

4 Symbols

For the purpose of this document, the symbols given in EN 10266:2003 and the following apply.

- TC test category.

NOTE See also Table 2 for symbols of the delivery condition.

5 Classification and designation

5.1 Classification

According to the classification system in EN 10020:2000, the steel grades are classified as:

- austenitic steels (corrosion resisting);

⁵ As impacted by EN ISO 10893-10:2011/A1:2020.

⁶ As impacted by EN ISO 10893-11:2011/A1:2020.