Welded circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 10296-2:2006 sisaldab Euroopa standardi EN 10296-2:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 10296-2:2006 consists of the English text of the European standard EN 10296-2:2006. This document is endorsed on 27.02.2006 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies the technical delivery conditions for welded tubes, of circular cross section, made from stainless steels, for mechanical and general engineering purposes.	**Scope:** This European Standard specifies the technical delivery conditions for welded tubes, of circular cross section, made from stainless steels, for mechanical and general engineering purposes.

ICS 77.140.75

Võtmesõnad: acceptance testing, circular form, forming machines, materials, orders : sales documents, ph, pipes, sampling, specifications, steels, test certificates, test specimens, testing, tubes, wall thicknesses, weldability, welded, welded tubes

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Welded circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel

Tubes ronds soudés en acier pour utilisation en mécanique générale et en construction mécanique - Conditions techniques de livraison - Partie 2: Tubes en acier inoxydable

Geschweißte kreisförmige Stahlrohre für den Maschinenbau und allgemeine technische Anwendungen - Technische Lieferbedingungen - Teil 2: Nichtrostende Stähle

This European Standard was approved by CEN on 4 April 2005.

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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 Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 10296-2:2005: E

Contents

Foreword

This document (EN 10296-2:2005) has been prepared by Technical Committee ECISS/TC 29 “Steel tubes and fittings for steel tubes”, 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 June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

Another part of EN 10296 is:

— Part 1: Non-alloy and alloy steel tubes

Another European Standard series, covering seamless steel tubes for mechanical and general engineering purposes, currently being prepared is:

— EN 10297: Seamless circular steel tubes for mechanical and general engineering purposes — Technical delivery conditions.

Other series of European Standards being prepared in this area are prEN 10294 - hollow bars for machining and EN 10305 - steel tubes for precision applications.

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

Introduction

The European Committee for Standardisation (CEN) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents applied to steel grades 1.4362 and 1.4854, the compositions of which are given in Tables 1 and 2.

CEN takes no position concerning the evidence, validity and scope of these patent rights.

The holders of these patent rights have assured CEN that they are willing to negotiate licences, under reasonable and non-discriminatory terms and conditions, with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with CEN. Information may be obtained from:

Grade 1.4362

Sandvik AB

SE-811 81 SANDVIKEN

Sweden

Grade 1.4854

Outokumpu OYJ

Intelectual Property Management

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Finland

Attention is drawn to the possibility that some of the elements within this European Standard may be the subject of patent rights other than those indicated above. CEN shall not be responsible for identifying any or all such patent rights.

1 Scope

This European Standard specifies the technical delivery conditions for welded tubes, of circular cross section, made from stainless steels, for mechanical and general engineering purposes.

2 Normative references

The following referenced documents are indispensable for the application 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 910*, Destructive tests on welds in metallic materials - Bend tests*

EN 10002-1, *Metallic materials – Tensile testing – Part 1: Method of test (at ambient temperature)*

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

EN 10021:1993, *General technical delivery requirements for steel and iron products*

EN 10027-1, *Designation systems for steel – Part 1: Steel names, principal symbols*

EN 10027-2, *Designation systems for steel – Part 2: Numerical system*

EN 10052:1993, *Vocabulary of heat treatment terms for ferrous products*

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

EN 10168, *Steel products – Inspection documents – List of information and description*

EN 10204, *Metallic products – Types of inspection documents*

EN 10246-2, *Non-destructive testing of steel tubes – Part 2: Automatic eddy current testing of seamless and welded (except submerged arc-welded) austenitic and austenitic-ferritic steel tubes for verification of hydraulic leak-tightness*

EN 10246-3, *Non-destructive testing of steel tubes – Part 3: Automatic eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections*

EN 10246-7, *Non-destructive testing of steel tubes – Part 7: Automatic full peripheral ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of longitudinal imperfections*

EN 10246-8, *Non-destructive testing of steel tubes – Part 8: Automatic ultrasonic testing of the weld seam of electric welded steel tubes for the detection of longitudinal imperfections*

EN 10246-9, *Non-destructive testing of steel tubes – Part 9: Automatic ultrasonic testing of the weld seam of submerged arc welded steel tubes for the detection of longitudinal and/or transverse imperfections*

EN 10246-10, *Non-destructive testing of steel tubes – Part 10: Radiographic testing of the weld seam of automatic fusion arc welded steel tubes for the detection of imperfections*

EN 10256*, Non-destructive testing of steel tubes – Qualification and competence of level 1 and 2 non-destructive testing personnel.*

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

CR 10260:1998, *Designation system for steel – Additional symbols*

EN ISO 377, *Steel and steel products – Location and preparation of samples and test pieces for mechanical testing (ISO 377:1997)*

EN ISO 8491, *Metallic materials – Tube (in full section) - Bend test (ISO 8491:1998)*

EN ISO 8492, *Metallic materials – Tube - Flattening test (ISO 8492:1998)*

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

EN ISO 8496, *Metallic materials – Tube - Ring tensile test (ISO 8496:1998)*

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

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

EN 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 3651-2:1998)*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 10020:2000, EN 10021:1993, EN 10052:1993 and EN 10266:2003 together with the following apply.

employer
organisation for which the person works on a regular basis

NOTE The employer may be either the tube manufacturer or a third party organisation providing non-destructive testing (NDT) services.

4 Symbols

For the purposes of this European Standard, the symbols given in EN 10266:2003 and CR 10260:1998 apply.

Not applicable.

5 Classification and designation

5.1 Classification

In accordance with the classification system in EN 10020, the steel grades listed in Tables 1 and 2 are stainless steels.

5.2 Designation

For tubes covered by this document the steel designation consists of:

— number of this document (EN 10296-2);

plus either:

— steel name in accordance with EN 10027-1 and CR 10260; or

— steel number allocated in accordance with EN 10027-2.