



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 10217-1:2002

Welded steel tubes for pressure purposes - Technical delivery conditions - Part 1: Non-alloy steel tubes with specified room temperature

Tubes soudés en acier pour service sous
pression - Conditions techniques de
livraison - Partie 1: Tubes en acier non
allié avec caractéristiques spécifiées à

Geschweißte Stahlrohre für
Druckbeanspruchungen - Technische
Lieferbedingungen - Teil 1: Rohre aus
unlegierten Stählen mit festgelegten

05/2002



National Foreword

This European Standard EN 10217-1:2002 was adopted as Luxembourgish Standard ILNAS-EN 10217-1:2002.

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English version

Welded steel tubes for pressure purposes - Technical delivery conditions - Part 1: Non-alloy steel tubes with specified room temperature properties

Tubes soudés en acier pour service sous pression -
Conditions techniques de livraison - Partie 1: Tubes en
acier non allié avec caractéristiques spécifiées à
température ambiante

Geschweißte Stahlrohre für Druckbeanspruchungen -
Technische Lieferbedingungen - Teil 1: Rohre aus
unlegierten Stählen mit festgelegten Eigenschaften bei
Raumtemperatur

This European Standard was approved by CEN on 25 April 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN 10217-1:2002) 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 November 2002, and conflicting national standards shall be withdrawn at the latest by November 2002.

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(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

Other parts of EN 10217 are:

- Part 2: Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties.
- Part 3: Alloy fine grain steel tubes.
- 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 organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 SCOPE

This Part of EN 10217 specifies the technical delivery conditions for two qualities TR1 and TR2 of welded tubes of circular cross section, made of non-alloy quality steel and with specified room temperature properties.

2 NORMATIVE REFERENCES

EN 10217 incorporates by date or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For date references, subsequent amendments to or revisions of, any of these publications apply to EN 10217 only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

The requirements of EN 10217 rule when they differ from those in the standards and documents referred to below:

EN 760, *Welding consumables - Fluxes for submerged arc welding – Classification*

EN 895, *Destructive tests on welds in metallic materials - Transverse tensile test*

EN 910, *Destructive tests on weld in metallic materials -Bend test*

EN 1321, *Destructive tests on welds in metallic materials - Macroscopic and microscopic examination of welds*

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

EN 10020, *Definitions and classification of grades of steel*

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

EN 10027-1, *Designation systems for steels - Part 1 : Steel names, principle symbols.*

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

EN 10045-1, *Metallic materials - Charpy impact test - Part 1 : Test method*

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

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

ENV 10220, *Seamless and welded steel tubes - Dimensions and masses per unit length*

EN 10233, *Metallic materials - Tubes - Flattening test*

EN 10234, *Metallic materials - Tubes - Drift expanding test*

EN 10246-1, *Non-Destructive Testing of steel tubes Part 1 : Automatic electromagnetic testing of seamless and welded (except submerged arc welded) ferromagnetic 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 10246-5, *Non-Destructive Testing of steel tubes – Part 5: Automatic full peripheral magnetic transducer/flux leakage testing of seamless and welded (except submerged arc-welded) ferromagnetic steel tubes for the detection of longitudinal imperfections*

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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 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 level 2 NDT personnel*

prEN 10266 ¹⁾, *Steel tubes, fittings and structural hollow sections - Symbols and definition of terms for use in product standards*

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

prEN 10168 ¹⁾, *Iron and steel products - Inspection documents - List of information and description*

EN ISO 2566-1, *Steel - Conversion of elongation values – Part 1: Carbon and low-alloy steels (ISO 2566-1:1984)*

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

CR 10260, *Designation systems for steel - Additional symbols*

CR 10261, *ECISS Information Circular IC 11 - Iron and steel - Review of available methods of chemical analysis.*

3 TERMS AND DEFINITIONS

For the purposes of this Part of EN 10217, the definitions given in EN 10020, EN 10021, EN 10052, prEN 10266 and the following apply.

3.1

employer

organisation for which a 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.

3.2

qualification of welding procedure

testing and inspection of the welding procedure for submerged arc welded (SAW) tubes by the manufacturer in accordance with annex A .

3.3

approval of welding procedure

testing and inspection of the welding procedure for SAW tubes witnessed and approved in accordance with Annex A by an authorised body.

1) In preparation; until this document is published as a European standard, a corresponding national standard should be agreed at the time of enquiry and order.

4 SYMBOLS

For the purposes of this Part of EN 10217, the symbols given in prEN 10266 and the following apply:

- C1, C2 category conformity indicators (see clauses 7.3.1 and 7.3.3.)
- TC test category.

5 CLASSIFICATION AND DESIGNATION

5.1 Classification

In accordance with the classification system in EN 10020, the steel grades are classified as non-alloy quality steels.

5.2 Designation

5.2.1 For the tubes covered by this Part of EN 10217 the steel designation consists of:

- a) the number of this Part of EN 10217;

plus either:

- a) the steel name in accordance with EN 10027-1 and CR 10260;

or:

- a) the steel number allocated in accordance with EN 10027-2 .

5.2.2 The steel name is designated by:

- a) the capital letter P for pressure purposes;
- b) the indication of the specified minimum yield strength for thickness less than or equal to 16 mm, expressed in MPa (see Table 4);

plus either:

- a) the alphanumeric TR1 for qualities without specified aluminium content, impact properties and specific inspection and testing requirements (see 9.1);

or:

- a) the alphanumeric TR2 for qualities with specified aluminium content, impact properties and specific inspection and testing requirements.

6 INFORMATION TO BE SUPPLIED BY THE PURCHASER

6.1 Mandatory information

The following information shall be supplied by the purchaser at the time of enquiry and order :

- a) the quantity (mass or total length or number);
- b) the term 'tube';
- c) the dimensions (outside diameter D and wall thickness T) (see Table 5).