Irish Standard
I.S. EN 10208-2:2009

Steel pipes for pipelines for combustible fluids - Technical delivery conditions - Part 2: Pipes of requirement class B

I.S. EN 10208-2:2009

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English Version

Steel pipes for pipelines for combustible fluids - Technical delivery conditions - Part 2: Pipes of requirement class B

Tubes en acier pour conduites de fluides combustibles - Conditions techniques de livraison - Partie 2: Tubes de la classe de préscription B

Stahlrohre für Rohrleitungen für brennbare Medien - Technische Lieferbedingungen - Teil 2: Rohre der Anforderungsklasse B

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Contents

Page

Foreword

This document (EN 10208-2:2009) has been prepared by Technical Committee ECISS/TC 29 “Steel tubes and fittings for steels 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of an identical text or by endorsement, at the latest by September 2009, and conflicting national standards shall be withdrawn at the latest by September 2009.

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

This document supersedes EN 10208-2:1996

This European Standard consists of the following parts, under the general title *Steel pipes for pipelines for combustible fluids — Technical delivery conditions:*

Part 1: Pipes of requirement class A

Part 2: Pipes of requirement class B

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

Introduction

It was the intention, when preparing this document, to avoid specifying the quality of line pipe to be used for a particular application. However, it was recognized that there are several quality levels commonly used, and it was decided to reflect these in the standard by the differentiation between two quality levels.

Firstly, the need was recognized to provide a basic quality level. This is designated requirement class A and considered in EN 10208-1.

Secondly, many purchasers impose requirements additional to the basic standard, for instance concerning toughness and non-destructive inspection. This approach is common, for example, for transmission pipelines. Such enhanced requirements are addressed in requirement class B and considered in EN 10208-2.

For offshore applications and other applications outside the scope of EN 10208-1 and EN 10208-2, other standards may be applicable, e.g. ISO 3183 [1].

The Charpy impact energy requirements in this document have been derived from established data, in accordance with EPRG recommendations [2], and are intended to prevent the occurrence of long running shear fracture in pipelines transporting clean, dry natural gas. It is the responsibility of the designer to decide whether these energy requirements suffice for the intended application. For example, rich gas or two-phase fluids may require additional testing to be carried out.

For pipes of requirement class B, a weld efficiency factor of 1,0 can be used in design calculations, due to the conditions specified for the manufacture of the pipes and for the testing of the tubes.

The selection of the requirement class depends on many factors: the properties of the fluid to be conveyed, the service conditions, design code and any statutory requirements should all be taken into consideration. Therefore this document gives no detailed guidelines. It is the ultimate responsibility of the user to select the appropriate requirement class for the intended application.

NOTE This document combines a wide range of product types, dimensions and technical restrictions in accordance with the functional requirements for gas supply systems referred to in EN 1594 [3].

1 Scope

This European Standard specifies the technical delivery conditions for seamless and welded steel pipes for the on land transport of combustible fluids primarily in gas supply systems but excluding pipeline applications in the petroleum and natural gas industries. It includes more stringent quality and testing requirements than those in EN 10208-1.

NOTE 1 Steel pipes for pipeline transportation systems within the petroleum and natural gas industries are covered by ISO 3183 [1]. This standard specifies products with the same (and additional) strength levels and partly similar (but not identical) requirements as EN 10208-1 and EN 10208-2 and is with two additional annexes specifying deviating or additional requirements also published as API Spec 5L [4].

NOTE 2 This European Standard does not apply to cast steel pipe.

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 473, *Non-destructive testing — Qualification and certification of NDT personnel — General principles*

EN 910, *Destructive tests on welds in metallic materials — Bend tests*

EN 1011-1, *Welding — Recommendations for welding of metallic materials — Part 1: General guidance for arc welding*

EN 1011-2, *Welding — Recommendations for welding of metallic materials — Part 2: Arc welding of ferritic steels*

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, *General technical delivery conditions for steel products*

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

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

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

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

EN 10079:2007, *Definition of steel products*

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

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

EN 10220, *Seamless and welded steel tubes — Dimensions and masses per unit length*

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*

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 10246-14, *Non-destructive testing of steel tubes — Part 14: Automatic ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of laminar imperfections*

EN 10246-15, *Non-destructive testing of steel tubes — Part 15: Automatic ultrasonic testing of strip/plate used in the manufacture of welded steel tubes for the detection of laminar imperfections*

EN 10246-16, *Non-destructive testing of steel tubes — Part 16: Automatic ultrasonic testing of the area adjacent to the weld seam of welded steel tubes for the detection of laminar imperfections*

EN 10246-17, *Non-destructive testing of steel tubes — Part 17: Ultrasonic testing of tube ends of seamless and welded steel tubes for the detection of laminar 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 structural hollow sections — Symbols and definitions of terms for use in product standards*

EN 10274, *Metallic materials — Drop weight tear test*

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

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

EN ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method* (ISO 6506-1:2005)

EN ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T) (ISO 6508-1:2005)*

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

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

ISO 19232-1, *Non-destructive testing — Image quality of radiographs — Part 1: Image quality indicators (wire type) — Determination of image quality value*

CEN/TR 10261, *Iron and steel — Review of available methods of chemical analysis*