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I.S. EN 10225:2009

Weldable structural steels for fixed offshore structures - Technical delivery conditions

I.S. EN 10225:2009

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EUROPEAN STANDARD

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English Version

Weldable structural steels for fixed offshore structures - Technical delivery conditions

Aciers de construction soudables destinés à la fabrication de structures marines fixes - Conditions techniques de livraison

Schweißgeeignete Baustähle für feststehende Offshore-Konstruktionen - Technische Lieferbedingungen

This European Standard was approved by CEN on 5 June 2009.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 10225:2009) has been prepared by Technical Committee ECISS/TC 10 “Structural steels - Grades and qualities”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by January 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

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 10225:2001.

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.

1 Scope

This European Standard specifies requirements for weldable structural steels to be used in the fabrication of fixed offshore structures in the form of plates up to and including 150 mm thick. It also specifies sections up to 63 mm thick except for sections delivered in the as-rolled condition which are permitted up to 25 mm thick only. Seamless hollow sections up to and including 40 mm thick and high frequency electric resistance welded hollow sections up to and including 20 mm thick are specified. Greater thicknesses for sections and hollow sections may be agreed, provided the technical requirements of this European Standard are maintained.

For plates the thickness limitations are:

S355G2+N, S355G5+M, - up to and including 20 mm

S355G3+N, S355G6+M - up to and including 40 mm

S355G7+N, S355G8+N, S355G9+N, S355G10+N - up to and including 150 mm

S355G7+M, S355G8+M, S355G9+M, S355G10+M - up to and including 100 mm

S420G1+QT, S420G1+M, S420G2+QT, S420G2+M - up to and including 100 mm

S460G1+QT, S460G1+M, S460G2+QT, S460G2+M - up to and including 100 mm

The standard is applicable to steels for offshore structures, designed to operate in the offshore sector but not to steels supplied for the fabrication of subsea pipelines, risers, process equipment, process piping, and other utilities. It is primarily applicable to the North Sea Sector, but may also be applicable in other areas provided that due consideration is given to local conditions e.g. temperature.

In the case of hollow sections formed from plate with the seam fusion welded, this European standard covers only the requirements of the plate material.

Minimum yield strengths up to 460 MPa are specified together with low temperature impact properties at temperatures down to –40 °C.

This European standard applies to material supplied ex-mill or from merchant's stock.

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 571-1, *Non-destructive testing — Penetrant testing — Part 1: General principles*

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

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

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

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

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