

This is a preview of "BS EN 10222-2:2017". [Click here to purchase the full version from the ANSI store.](#)



BSI Standards Publication

Steel forgings for pressure purposes

Part 2: Ferritic and martensitic steels with specified elevated temperatures properties

This is a preview of "BS EN 10222-2:2017". [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 10222-2:2017. It supersedes BS EN 10222-2:2000, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/111, Steel Castings and Forgings.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

ISBN 978 0 580 80525 7

ICS 77.140.85; 77.140.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2017.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

This is a preview of "BS EN 10222-2:2017". [Click here to purchase the full version from the ANSI store.](#)

EUROPÄISCHE NORM

April 2017

ICS 77.140.30; 77.140.85

Supersedes EN 10222-2:1999

English Version

Steel forgings for pressure purposes - Part 2: Ferritic and martensitic steels with specified elevated temperatures properties

Pièces forgées en acier pour appareils à pression -
Partie 2: Aciers ferritiques et martensitiques avec
caractéristiques spécifiées à température élevée

Schmiedestücke aus Stahl für Druckbehälter - Teil 2:
Ferritische und martensitische Stähle mit festgelegten
Eigenschaften bei erhöhten Temperaturen

This European Standard was approved by CEN on 25 December 2016.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

This is a preview of "BS EN 10222-2:2017". [Click here to purchase the full version from the ANSI store.](#)

Contents	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Classification and designation	4
4.1 Classification	4
4.2 Designation	4
5 Information to be supplied by the purchaser	4
5.1 Mandatory informations	4
5.2 Options	5
6 Requirements	5
6.1 Steelmaking process and manufacture of the product	5
6.2 Delivery condition	5
6.3 Chemical composition and chemical composition properties	5
6.3.1 Cast analysis	5
6.3.2 Product analysis	5
6.4 Mechanical properties	5
6.5 Surface condition	6
6.6 Internal soundness	6
6.7 Resistance to hydrogen induced cracking	6
7 Inspection	6
8 Sampling	6
9 Test methods	6
10 Retests	6
11 Marking	6
Annex A (informative) Reference data for stress rupture properties and 1 % creep limit properties	17
Annex B (informative) Significant technical changes to the version EN 10222-2:1999	25
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2014/68/EU	26
Bibliography	27

This is a preview of "BS EN 10222-2:2017". [Click here to purchase the full version from the ANSI store.](#)

European foreword

This document (EN 10222-2:2017) has been prepared by Technical Committee ECISS/TC 111 "Steel castings and forgings", the secretariat of which is held by AFNOR.

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 2017, and conflicting national standards shall be withdrawn at the latest by October 2017.

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

This document supersedes EN 10222-2:1999.

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 10222 consists of the following parts under the general title "Steel forgings for pressure purposes":

- *Part 1: General requirements for open die forgings*
- *Part 2: Ferritic and martensitic steels with specified elevated temperature properties*
- *Part 3: Nickel steels with specified low temperature properties*
- *Part 4: Weldable fine grain steels with high proof strength*
- *Part 5: Martensitic, austenitic and austenitic-ferritic stainless steels.*

Annex B provides details about significant technical changes to EN 10222-2:1999.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This part of this European Standard specifies the technical delivery conditions for forgings for pressure purposes, made of ferritic and martensitic steels with specified elevated temperature properties. Chemical composition and mechanical properties are specified.

NOTE Once this standard is published in the EU Official Journal (OJEU) under Directive 2014/68/EU, presumption of conformity to the Essential Safety Requirements (ESRs) of Directive 2014/68/EU is limited to technical data of materials in this standard 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 Directive 2014/68/EU are satisfied, needs to be done. The series EN 10222-1 to EN 10222-5 is structured so that the data related to different materials is in the part allocated for that material. The presumption of conformity to the Essential Safety Requirements of Directive 2014/68/EU depends on both the text in part 1 and the data in part 2, 3, 4 or 5.

General information on technical delivery condition is given in EN 10021.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10222-1:2017, *Steel forgings for pressure purposes — Part 1: General requirements*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 10222-1:2017 apply.

4 Classification and designation

4.1 Classification

In accordance with EN 10020, the grades P235GH, P245GH, P250GH, P265GH, P280GH, P295GH and P305GH are non-alloy quality steels. All others are alloy special steels.

4.2 Designation

See EN 10222-1:2017.

5 Information to be supplied by the purchaser

5.1 Mandatory informations

See EN 10222-1:2017