INTERNATIONAL STANDARD

**ISO 9327-2**

First edition
1999-06-15

# Steel forgings and rolled or forged bars for pressure purposes — Technical delivery conditions —

## Part 2:
Non-alloy and alloy (Mo, Cr and CrMo) steels with specified elevated temperature properties



*Pièces forgées et barres laminées ou forgées en acier pour appareils à pression — Conditions techniques de livraison —*

*Partie 2: Aciers non alliés et alliés (Mo, Cr et CrMo) avec caractéristiques spécifiées à température élevée*



Reference number
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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9327-2 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 10, *Steel for pressure purposes*.

This first edition, together with parts 1 and 3 to 5 of ISO 9327, cancels and replaces ISO 2604-1:1975.

ISO 9327 consists of the following parts, under the general title *Steel forgings and rolled or forged bars for pressure purposes — Technical delivery conditions*:

— *Part 1: General requirements*

— *Part 2: Non-alloy and alloy (Mo, Cr and CrMo) 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: Stainless steels*

# Steel forgings and rolled or forged bars for pressure purposes — Technical delivery conditions —

# Part 2:
Non-alloy and alloy (Mo, Cr and CrMo) steels with specified elevated temperature properties



## 1 Scope

**1.1** This part of ISO 9327 applies to forgings and rolled or forged bars in thicknesses up to 250 mm (partly up to 500 mm) manufactured from the steels listed in Table 1 and to be delivered according to the specifications given in ISO 9327-1.

**1.2** This part of ISO 9327 covers the following data:

a) in Table 1 the limits for

- the chemical composition according to the cast analysis;
- the tensile properties at room temperature;
- the impact properties;
- the indications on the usual heat treatment condition at the time of delivery;

b) in Table 2 the permissible product analysis tolerances on the limiting values given for the cast analysis;

c) in Table 3 the minimum elevated temperature proof strength values (see C.4 of ISO 9327-1:1998);

d) in Table 4 the estimated average stress rupture properties;

e) in Table 5 the estimated average strength values for 1 % plastic strain.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 9327. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 9327 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 148:1983, *Steel — Charpy impact test (V-notch).*

ISO 4948-1:1982, *Steels — Classification — Part 1: Classification of steel into unalloyed and alloy steels based on chemical composition.*

ISO/TR 4949:1989, *Steel names based on letter symbols.*

ISO 9327-1, *Steel forgings and rolled or forged bars for pressure purposes — Technical delivery conditions — Part 1: General requirements*.

ISO/TR 15461:1997, *Steel forgings — Testing frequency, sampling conditions and test methods for mechanical tests.*

## 3 Terms and definitions

For the purposes of this part of ISO 9327, the terms and definitions given in ISO 9327-1 apply.



## 4 Ordering

See ISO 9327-1.

## 5 Requirements



See ISO 9327-1 and Tables 1 to 5.

## 6 Inspection, testing and conformity of products

See ISO 9327-1.

## 7 Marking

See ISO 9327-1.