International Standard

ISO 1035

Hot-rolled steel bars — Dimensions, shape, masses and tolerances

Barres en acier laminées à chaud — Dimensions, formes, masses et tolérances

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 17, *Steels*, Subcommittee SC 3, *Steels for structural purposes*.

This first edition of ISO 1035 cancels and replaces ISO 1035-1:1980, ISO 1035-2:1980, ISO 1035-3:1980 and ISO 1035-4:1982, which have been technically revised.

The main changes are as follows:

— figures illustrating forms of hot-rolled bars have been added;

— the category of dimensions and second preference dimensions has been cancelled;

— upper limits of dimensions and dimensional tolerances for hot-rolled round, square and flat bars have been revised;

— dimensions for hexagonal and octagonal bars have been added;

— requirement for maximum permissible value for hot-rolled flat bars was added.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Hot-rolled steel bars — Dimensions, shape, masses and tolerances

1 Scope

This document specifies dimensions, shape, mass and tolerances of metric series hot-rolled steel bars.

This document is applicable to:

a) hot-rolled round bars with diameter of 5,5 mm up to 400 mm;

b) hot-rolled square bars with side length of 5,5 mm up to 300 mm;

c) hot-rolled flat bars with thickness of 3 mm up to 60 mm and width of 10 mm up to 200 mm;

d) hot-rolled hexagonal bars with distance across opposite flats of 8 mm up to 70 mm;

e) hot-rolled octagonal bars with distance across opposite flats of 16 mm up to 40 mm.

NOTE Wide flats can be covered under flat bars for practical reasons.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 6929, *Steel products — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6929 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Designation

The designation of hot-rolled steel bars shall comprise:

— the term round bar, square bar, flat bar, hexagonal or octagonal bar;

— the number of the standard, i.e. ISO 1035;

— the nominal dimension(s) in mm and the tolerance classes;

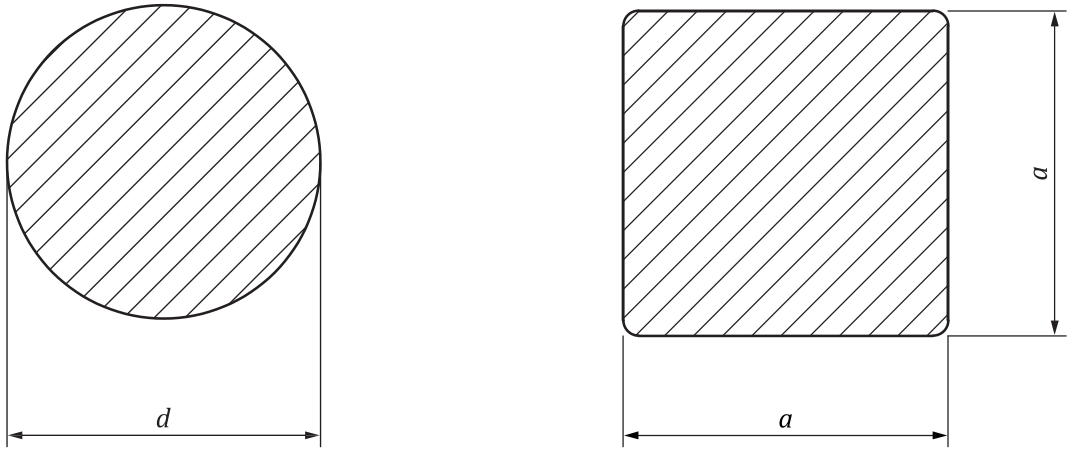
— the number of the quality standard and the steel name of the ordered steel.

EXAMPLE

Round bar ISO 1035-50 N×6000L0

5 Cross-sectional form

5.1 Cross-sectional forms of hot-rolled round bars and square bars are shown in Figure 1.



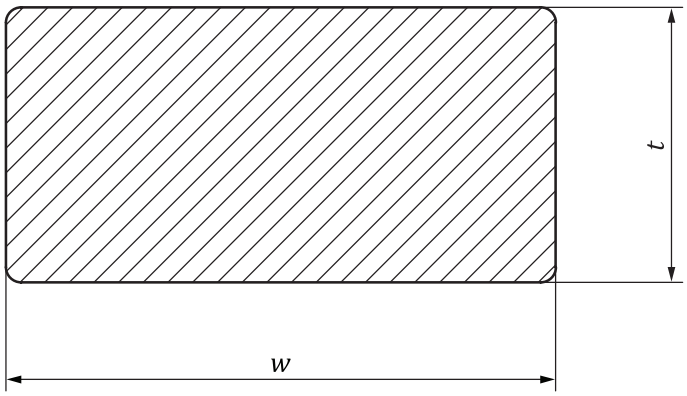
a) **b)**

Key

d	diameter
a	side length

Figure 1 — Cross-sectional forms of hot-rolled round bars and square bars

5.2 Cross-sectional form of hot-rolled flat bars is shown in Figure 2.

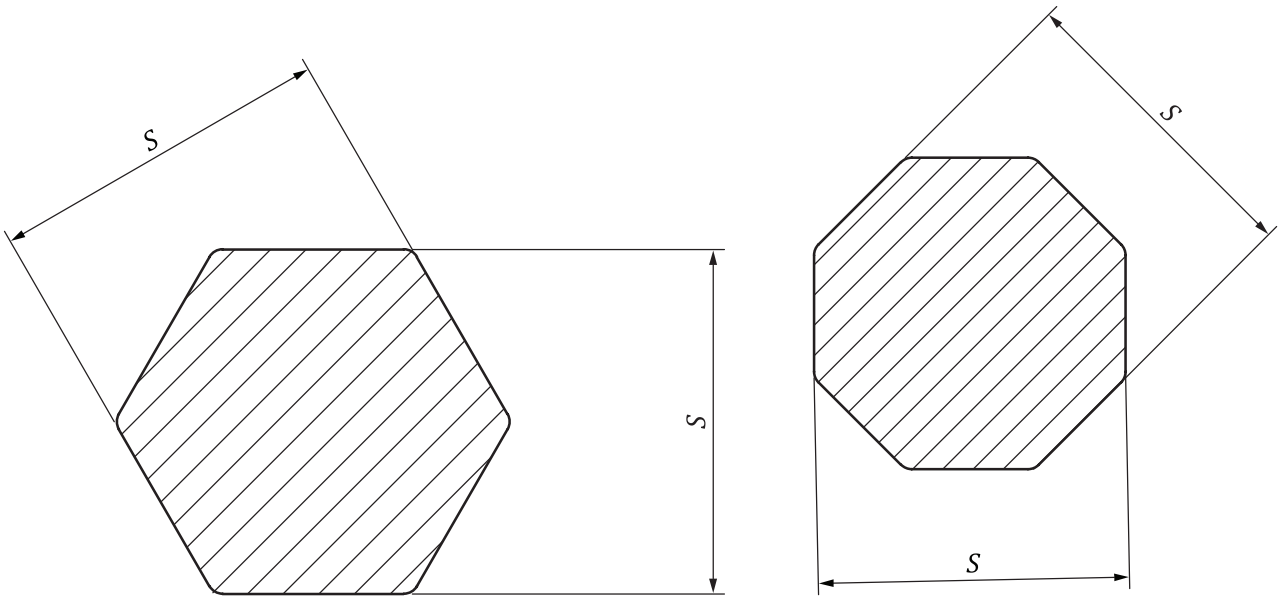


Key

w	width
t	thickness

Figure 2 — Cross-sectional form of hot-rolled flat bars

5.3 Cross-sectional forms of hot-rolled hexagonal and octagonal bars are shown in Figure 3.



a) b)

Key

S distance across flats

Figure 3 — Cross-sectional forms of hot-rolled hexagonal and octagonal bars

6 Dimensions, masses and tolerances

6.1 Dimensions and masses

6.1.1 The preferred dimensions and masses per unit length of hot-rolled round bars are given in Table A.1.

6.1.2 The preferred dimensions and masses per unit length of hot-rolled square bars are given in Table A.2.

6.1.3 The preferred dimensions and masses per unit length of hot-rolled flat bars are given in Table A.3.

6.1.4 The preferred dimensions, sectional areas and masses per unit length of hot-rolled hexagonal and octagonal bars are given in Table A.4.

6.1.5 Upon agreement between the supplier and purchaser, steel bars may be delivered in other dimensions unlisted in Annex A, and it shall be indicated in the contract.