International Standard 1035/4

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Hot-rolled steel bars — Part 4 : Tolerances

Barres en acier laminées à chaud — Partie 4 : Tolérances

Second edition — 1982-08-01

UDC 629.14-422 : 621.753.1 **Ref. No. ISO 1035/4-1982 (E)**

Descriptors : iron- and steel products, hot rolled products, metal bars, dimensions, dimensional tolerances, metric system.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 1035/4 was developed by Technical Committee ISO/TC 17, *Steel*, and was circulated to the member bodies in April 1981.

It has been approved by the member bodies of the following countries :

Australia	India	Romania
Austria	Italy	South Africa, Rep. of
Brazil	Japan	Spain
Canada	Kenya	Sweden
China	Korea, Dem. P. Rep. of	Switzerland
Czechoslovakia	Korea, Rep. of	Tanzania
Egypt, Arab Rep. of	Netherlands	Turkey
France	New Zealand	United Kingdom
Germany, F.R.	Norway	USSR
Hungary	Poland	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Belgium
USA

This second edition cancels and replaces the first edition (i.e. ISO 1035/4-1976).

Printed in Switzerland

Hot-rolled steel bars — Part 4 : Tolerances

1 Scope and field of application

This International Standard specifies metric dimensional tolerances applicable to hot-rolled steel bars supplied in straight lengths in the following product forms :

a) round bars (for dimensions, see ISO 1035/1);

b) square bars (for dimensions, see ISO 1035/2);

c) hexagonal bars;

d) octagonal bars;

e) flat bars (for dimensions, see ISO 1035/3).

The tolerances achievable by the manufacturer may vary with the steel types. The tolerances required by the purchaser may differ according to the application of the bars. Thus this International Standard specifies several tolerance classes (see table 1). The appropriate tolerance class should be specified in the International Standard relevant to the steel grades and, where appropriate, on the order.

2 References

ISO 1035/1, *Hot-rolled steel bars — Part 1 : Dimensions of round bars.*

ISO 1035/2, *Hot-rolled steel bars — Part 2 : Dimensions of square bars.*

ISO 1035/3, *Hot-rolled steel bars — Part 3 : Dimensions of flat bars.*

3 Survey on tolerance classes and their designations

Table 1 gives a survey on the different dimensional tolerance classes specified in this International Standard and on the designations applied for these.

4 Tolerances of hot-rolled steel round, square, hexagonal and octagonal bars

4.1 Tolerances on size

4.1.1 The tolerances on size shall be as specified in table 2 (see 4.5).

4.1.2 The permissible **ovality** for all diameters of round bars, measured as the difference between the maximum and minimum diameters of the same cross-section, shall be 75 % of the total tolerance specified on the diameter according to table 2 (for example 1,2 mm for a nominal diameter of 40 mm ordered according to tolerance class N) (see 4.5).

4.1.3 The permissible **out-of-square** for all sizes of square bars, measured as the difference of the distance between parallel faces of the same cross-section, shall be 75 % of the total tolerance specified on the normal width of side in table 2 (see 4.5).

4.1.4 The permissible **out-of-section** for all sizes of hexagonal and octagonal bars, measured as the maximum difference in the distances across opposite flats of the same cross-section (three measurements in the case of hexagonal bars, four measurements in the case of octagonal bars) shall be 75 % of the total tolerance for the nominal size according to table 2 (see 4.5).

4.2 Tolérances on length

The tolerances on length shall be as specified in table 3.

4.3 Straightness tolerances

The straightness tolerances shall be as specified in table 4 (see 4.5).