

# JIS

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☞ JIS G 4318 : 1998

**Cold finished stainless steel bars**

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**ICS** 77.140.20 ; 77.140.60

**Descriptors** : bars (materials), cold-working, stainless steels, corrosion-resistant steels,  
material-deforming processes, materials by form, metal sections

**Reference number** : JIS G 4318 : 1998 (E)

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## Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently, JIS G 4318:1991 is replaced with JIS 4318:1998.

Date of Establishment: 1981-03-01

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In the event of any doubts arising as to the contents,  
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## Cold finished stainless steel bars

**Introduction** This Standard is established in 1981 and comes to the present through the revision in 1991. In order to be reflected technical change and change of demands on and after the last revision, the standard comes to this revision. Though study is advanced in order to conform to International Standard, International standard (ISO 683-13) as the object is decided to be annulled at TC17/SC4 in June, 1996, and newly revised into two standards of flat product and long product, however, they are not yet agreed upon. Therefore, this revision is advanced considering that the object International Standard does not exist.

Dimensional tolerances have preliminarily conformed to International standard (ISO R 286, ISO System of Limits and Fits).

Principal revised points are as follows.

- a) **Grades and symbols** SUS303Cu and SUS316F are added to obtain 28 grades as total by request from domestic customers.
- b) **Dimensional tolerances** Tolerances on extraction of round bars are changed from classes 11 to 13 to clauses 9 to 11. Further, classes 14 to 18 are added to dimensional tolerances on flat bars.
- c) Item for report is newly established.

**1 Scope** This Japanese Industrial Standard specifies cold finished stainless steel bars (round bars, square bars, hexagonal bars, and flat bars, hereafter generically referred to as "bars").

**2 Normative references** The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards indicated below shall be applied.

JIS B 0401 *System of limits and fits*

JIS G 0303 *General rules for inspection of steel*

JIS G 4303 *Stainless steel bars*

JIS G 4304 *Hot rolled stainless steel plates, sheets and strip*

JIS G 4305 *Cold rolled stainless steel plates, sheets and strip*

JIS G 4308 *Stainless steel wire rods*

JIS Z 2201 *Test pieces for tensile test for metallic materials*

JIS Z 2241 *Method of tensile test for metallic materials*

JIS Z 2243 *Method of Brinell hardness test*

JIS Z 2244 *Method of Vickers hardness test*

JIS Z 2245 *Method of Rockwell and Rockwell superficial hardness test*

**3 Grade and symbol** Bars shall be classified into 28 grades, and their symbols and classification shall be as given in Table 1.

**Table 1 Symbol of grade and classification**

| Symbol of grade | Classification    | Symbol of grade                                                                                  | Classification             |
|-----------------|-------------------|--------------------------------------------------------------------------------------------------|----------------------------|
| SUS302          | Austenitic series | SUS329J1                                                                                         | Austenitic-ferritic series |
| SUS303          |                   | SUS430<br>SUS430F                                                                                | Ferritic series            |
| SUS303Se        |                   |                                                                                                  |                            |
| SUS303Cu        |                   | SUS403<br>SUS410<br>SUS410F2<br>SUS416<br>SUS420J1<br>SUS420J2<br>SUS420F<br>SUS420F2<br>SUS440C | Martensitic series         |
| SUS304          |                   |                                                                                                  |                            |
| SUS304L         |                   |                                                                                                  |                            |
| SUS304J3        |                   |                                                                                                  |                            |
| SUS305          |                   |                                                                                                  |                            |
| SUS305J1        |                   |                                                                                                  |                            |
| SUS309S         |                   |                                                                                                  |                            |
| SUS310S         |                   |                                                                                                  |                            |
| SUS316          |                   |                                                                                                  |                            |
| SUS316L         |                   |                                                                                                  |                            |
| SUS316F         |                   |                                                                                                  |                            |
| SUS321          |                   |                                                                                                  |                            |
| SUS347          |                   |                                                                                                  |                            |

Remarks: When it is required to indicate, by a symbol, that the products are bars, -CB shall be suffixed to the symbol of grade.

Example : SUS304-CB

**4 Chemical composition** The chemical composition shall be in accordance with JIS G 4303, JIS G 4304 and JIS G 4305.

**5 Mechanical properties** Mechanical properties of bars shall be agreed upon between the parties concerned with delivery.

## 6 Dimensions and tolerances

**6.1 Standard dimensions** Standard dimensions of bars shall be as given in Table 2 and Table 3.

**Table 2 Standard dimensions (round bars, square bars, and hexagonal bars)**

Unit : mm

| Shape   | Diameter, side length, or width across flats |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |  |  |  |
|---------|----------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|--|--|--|
| Round   | 5                                            | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26  |  |  |  |
|         | 28                                           | 30 | 32 | 35 | 36 | 38 | 40 | 42 | 45 | 48 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |  |  |  |
| Square  | 5                                            | 6  | 7  | 8  | 9  | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 19 | 20 | 22 | 25 | 28 | 30 | 32 | 35 | 36  |  |  |  |
|         | 38                                           | 40 | 45 | 55 | 60 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Hexagon | 5.5                                          | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 17 | 19 | 21 | 22 | 23 | 24 | 26 | 27 | 29 | 30 | 32  |  |  |  |
|         | 35                                           | 36 | 38 | 41 | 46 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |    |    |    |    |    |    |    |    |     |  |  |  |