INTERNATIONAL STANDARD

ISO 8734

Second edition
1997-11-15

Parallel pins, of hardened steel and martensitic stainless steel (Dowel pins)

Goupilles cylindriques en acier trempé et en acier inoxydable martensitique

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.

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 8734 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

This second edition cancels and replaces the first edition (ISO 8734:1987), which has been technically revised.

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Parallel pins of hardened steel and martensitic stainless steel (Dowel pins)

1 Scope

This International Standard specifies the characteristics of parallel pins (dowel pins) of steel, through hardened or case hardened and martensitic stainless steel with nominal diameters, d, from 1 mm to 20 mm inclusive.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

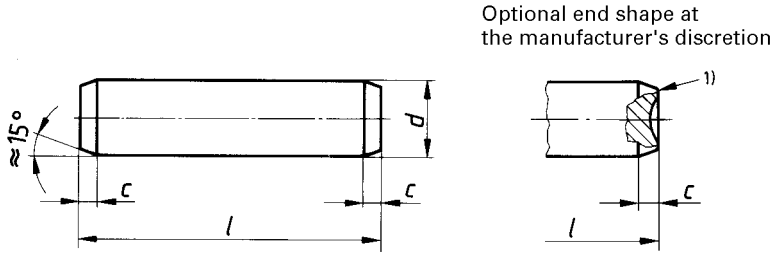
ISO 3269:1988, *Fasteners – Acceptance inspection*.

ISO 3506-1:1997, *Corrosion-resistant stainless steel fasteners – Part 1: Bolts, screws and studs*.

ISO 4042:–[1], *Fasteners – Electroplated coatings*.

3 Dimensions

See figure 1 and table 1.



1) Radius and dimpled pin end permissible

Figure 1

1) To be published. (Revision of ISO 4042:1989)

Table 1 — Dimensions

Dimensions in millimetres

d m6[1]			1	1,5	2	2,5	3	4	5	6	8	10	12	16	20
c ≈			0,2	0,3	0,35	0,4	0,5	0,63	0,8	1,2	1,6	2	2,5	3	3,5
l[2]															
nom.	min.	max.													
3	2,75	3,25													
4	3,75	4,25													
5	4,75	5,25													
6	5,75	6,25													
8	7,75	8,25													
10	9,75	10,25													
12	11,5	12,5													
14	13,5	14,5													
16	15,5	16,5													
20	19,5	20,5					Range								
22	21,5	22,5													
24	23,5	24,5													
26	25,5	26,5						of							
28	27,5	28,5													
30	29,5	30,5													
32	31,5	32,5									commercial				
35	34,5	35,5													
40	39,5	40,5													
45	44,5	45,5										lengths			
50	49,5	50,5													
55	54,25	55,75													
60	59,25	60,75													
65	64,25	65,75													
70	69,25	70,75													
75	74,25	75,75													
80	79,25	80,75													
85	84,25	85,75													
90	89,25	90,75													
95	94,25	95,75													
100	99,25	100,75													

1) Other tolerances as agreed between customer and supplier.

2) For nominal lengths above 100 mm, steps of 20 mm.

4 Requirements and reference International Standards

See table 2.

Table 2 — Requirements and reference International Standards

<table>
<tr><td rowspan="6">Material[1)]</td><td colspan="3">Steel</td><td>Martensitic stainless steel</td></tr>
<tr><td colspan="3">St</td><td>C1 in accordance with ISO 3506-1</td></tr>
<tr><td>Type A

pin through hardened</td><td colspan="2">Type B

pin case hardened</td><td rowspan="3">hardened and tempered to a hardness of 460 HV30 to 560 HV30</td></tr>
<tr><td colspan="3">Chemical composition limits
(check analysis) %</td></tr>
<tr><td>C 0,95 to 1,1
Si 0,15 to 0,35
Mn 0,25 to 0,4
P 0,03 max.
S 0,025 max.
Cr 1,35 to 1,65

Hardness:
550 HV30 to 650 HV30</td><td>either
C 0,06 to 0,13
Si 0,1 to 0,4
Mn 0,25 to 0,6
P 0,025 max.
S 0,05 max.

at the supplier's discretion
Surface hardness: 600 HV1 to 700 HV1
Hardness at case depth 0,25 to 0,4 mm:
550 HV1 min.</td><td>or
C 0,15 max.
Si 0,10 max.
Mn 0,9 to 1,3
P 0,07 max.
S 0,15 to 0,35
Pb 0,15 to 0,35</td></tr>
<tr><td rowspan="2">Surface</td><td colspan="3">Plain, i.e. pins to be supplied in natural finish, treated with a protective lubricant, unless otherwise specified by agreement between customer and supplier.</td><td rowspan="2">Plain, i.e. pins to be supplied in natural finish.</td></tr>
<tr><td colspan="3">If pins are surface coated appropriate plating or coating processes should be employed to avoid hydrogen embrittlement. When pins are electroplated or phosphate-coated, they shall be suitably treated immediately after plating or coating to obviate detrimental hydrogen embrittlement, although freedom from hydrogen embrittlement ist not absolutely guaranteed (see ISO 4042).

All tolerances shall apply prior to the application of a plating or coating.</td></tr>
<tr><td>Surface roughness</td><td colspan="4">$R_a \leqslant 0{,}8\ \mu m$</td></tr>
<tr><td>Workmanship</td><td colspan="4">Pins shall be free of irregularities or detrimental defects.

No burrs shall appear on any part of the pin.</td></tr>
<tr><td>Acceptability</td><td colspan="4">The acceptance procedure is covered in ISO 3269.</td></tr>
<tr><td colspan="5">1) Other materials as agreed between customer and supplier.</td></tr>
</table>

5 Designation

EXAMPLE 1
A through hardened steel parallel pin type A, with nominal diameter d = 6 mm and nominal length l = 30 mm is designated as follows:

Parallel pin ISO 8734 – 6 × 30 – A – St

EXAMPLE 2
A martensitic stainless steel parallel pin of grade C1, with nominal diameter d = 6 mm and nominal length l = 30 mm is designated as follows:

Parallel pin ISO 8734 – 6 × 30 – C1

ICS 21.060.50

Descriptors: fasteners, steel products, pins (mechanics), straight pins, specifications, characteristics, dimensions, designation.

Price based on 4 pages