INTERNATIONAL STANDARD

ISO 1234

Second edition
1997-11-01

Split pins

Goupilles fendues

Reference number
ISO 1234:1997(E)

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 1234 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

This second edition cancels and replaces the first edition (ISO 1234:1976), which has been technically revised.

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Split pins

1 Scope

This International Standard specifies the characteristics of split pins.

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

ISO 9717:1990, *Phosphate conversion coatings for metals – Method of specifying requirements*.

3 Dimensions

See figure 1, table 1 and table 2

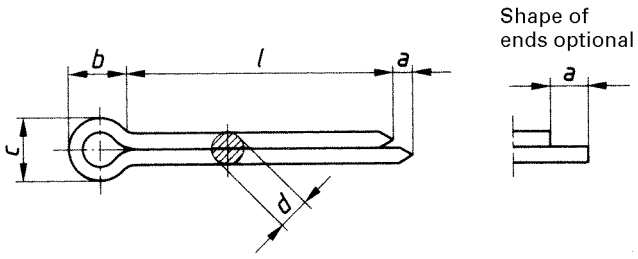

Figure 1

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

Table 1 — Dimensions (Lengths *l* : see table 2)

Dimensions in millimetres

Nominal size[1]			0,6	0,8	1	1,2	1,6	2	2,5	3,2
d		max.	0,5	0,7	0,9	1,0	1,4	1,8	2,3	2,9
		min.	0,4	0,6	0,8	0,9	1,3	1,7	2,1	2,7
a		max.	1,6	1,6	1,6	2,50	2,50	2,50	2,50	3,2
		min.	0,8	0,8	0,8	1,25	1,25	1,25	1,25	1,6
b		≈	2	2,4	3	3	3,2	4	5	6,4
c		max.	1,0	1,4	1,8	2,0	2,8	3,6	4,6	5,8
		min.	0,9	1,2	1,6	1,7	2,4	3,2	4,0	5,1
Corresponding diameters[2]	Bolts	over	–	2,5	3,5	4,5	5,5	7	9	11
		to	2,5	3,5	4,5	5,5	7	9	11	14
	Clevis pins	over	–	2	3	4	5	6	8	9
		to	2	3	4	5	6	8	9	12

Nominal size[1]			4	5	6,3	8	10	13	16	20
d		max.	3,7	4,6	5,9	7,5	9,5	12,4	15,4	19,3
		min.	3,5	4,4	5,7	7,3	9,3	12,1	15,1	19,0
a		max.	4	4	4	4	6,30	6,30	6,30	6,30
		min.	2	2	2	2	3,15	3,15	3,15	3,15
b		≈	8	10	12,6	16	20	26	32	40
c		max.	7,4	9,2	11,8	15,0	19,0	24,8	30,8	38,5
		min.	6,5	8,0	10,3	13,1	16,6	21,7	27,0	33,8
Corresponding diameters[2]	Bolts	over	14	20	27	39	56	80	120	170
		to	20	27	39	56	80	120	170	–
	Clevis pins	over	12	17	23	29	44	69	110	160
		to	17	23	29	44	69	110	160	–

1) Nominal size = diameter of the split pin hole; for the pin hole diameter the following tolerance classes are recommended.

H13 for nominal size ⩽ 1,2
H14 for nominal size > 1,2

2) For railway applications and in cases where split pins in clevis pins are subjected to alternating transverse forces, it is recommended to use the next larger split pin size to that specified in this table.

Table 2 — Nominal lengths *l* and commercial lengths

Dimensions in millimetres

Length *l*			Nominal size															
nom.	min.	max.	0,6	0,8	1	1,2	1,6	2	2,5	3,2	4	5	6,3	8	10	13	16	20
4	3,5	4,5																
5	4,5	5,5																
6	5,5	6,5																
8	7,5	8,5																
10	9,5	10,5																
12	11	13																
14	13	15																
16	15	17				Range of												
18	17	19																
20	19	21																
22	21	23																
25	24	26																
28	27	29																
32	30,5	33,5							commercial									
36	34,5	37,5																
40	38,5	41,5																
45	43,5	46,6										lengths						
50	48,5	51,5																
56	54,5	57,5																
63	61,5	64,5																
71	69,5	72,5																
80	78,5	81,5																
90	88	92																
100	98	102																
112	110	114																
125	123	127																
140	138	142																
160	158	162																
180	178	182																
200	198	202																
224	222	226																
250	248	252																
280	278	282																

4 Requirements and reference International Standards

See table 3.

Table 3 — Requirements and reference International Standards

Material	Steel (St) Copper-zinc alloy (Cu Zn) Copper (Cu) Aluminium alloy (Al) Austenitic stainless steel (A) Other materials as agreed between customer and supplier.
Ductility	Each leg of the split pin shall be capable of withstanding being bent back upon itself once, with no visible indication of fracture occuring at the point of bend.
Surface finish	Plain i.e. parts to be supplied in natural finish, treated with a protective lubricant, or with other coatings as agreed between customer and supplier. For electroplated coatings, see ISO 4042. For phosphate coating see ISO 9717.
Workmanship	Pins shall be free of burrs, irregularities and detrimental defects. The eye shall be as circular as possible. The cross-section of the two straight legs together shall be circular.
Acceptability	For acceptance procedure, see ISO 3269.

5 Designation

A split pin of nominal size 5 mm, nominal length l = 50 mm, made of steel (St) is designated as follows:

Split pin ISO 1234 – 5 × 50– St