इंटरनेट मानक

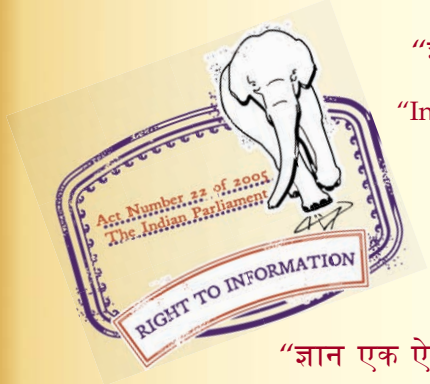
Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 7384 (2005): Grooved pins - Full-Length Parallel Grooved, with Pilot [PGD 31: Bolts, Nuts and Fasteners Accessories]



"ज्ञान से एक नये भारत का निर्माण"
Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"

"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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IS 7384 : 2005
ISO 8739 : 1997

भारतीय मानक

खाँचेदार पिन — सम्पूर्ण लम्बाई के समानांतर खाँचे, पायलट सहित

(दूसरा पुनरीक्षण)

Indian Standard

GROOVED PINS — FULL-LENGTH PARALLEL GROOVED, WITH PILOT

(Second Revision)

ICS 21.060.50

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

August 2005

Price Group 2

NATIONAL FOREWORD

This Indian Standard (Second Revision) which is identical with ISO 8739 : 1997 'Grooved pins — Full-length parallel grooved, with pilot' issued by the International Organization for Standardization was adopted by the Bureau of Indian Standards on the recommendations of the Bolts, Nuts and Fasteners Accessories Sectional Committee and approval of the Medical Instruments, General and Production Engineering Division Council.

The original version of this standard was issued in 1974 and revised in 1990. This second revision is being published harmonizing with adoption of ISO 8739 : 1997 to make pace with the latest developments taken place at international level.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain terminology and conventions are, however, not identical to those used in the Indian Standards. Attention is drawn especially to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.

b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are listed below along with their degree of equivalence for the editions indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
ISO 3269 : 1988[1)] Fasteners — Acceptance inspection	IS 1367 (Part 17) : 2005 Technical supply conditions for threaded steel fasteners: Part 17 Inspection, sampling and acceptance procedure (*fourth revision*)	Identical
ISO 3506-1 : 1997 Corrosion-resistant stainless-steel fasteners — Part 1: Bolts, screws and studs	IS 1367 (Part 14/Sec 1) : 2002 Technical supply conditions for threaded steel fasteners: Part 14 Mechanical properties of corrosion-resistant stainless-steel fasteners, Section 1 Bolts, screws and studs (*third revision*)	do
ISO 4042 : 1989[2)] Threaded components — Electroplated coatings	IS 1367 (Part 11) : 2002 Technical supply conditions for threaded steel fasteners: Part 11 Electroplated coatings (*third revision*)	do

[1)] Since revised in 2000.
[2)] Since revised in 1999.

(*Continued on third cover*)

Indian Standard

GROOVED PINS — FULL-LENGTH PARALLEL GROOVED, WITH PILOT

(Second Revision)

1 Scope

This International Standard specifies the characteristics of full-length parallel grooved pins, made of steel or austenitic stainless steel, with pilot which have three equally spaced grooves impressed longitudinally on their exterior surface and a pilot to facilitate insertion, with nominal diameter, d_1, from 1,5 mm to 25 mm inclusive.

The displaced material to each side of the grooves forming an expanded diameter d_2 which is larger than the nominal diameter d_1 will cause a non-positive locking fit when these grooved pins are forced into a drilled hole equal to the nominal diameter d_1 (see clause 4).

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.*

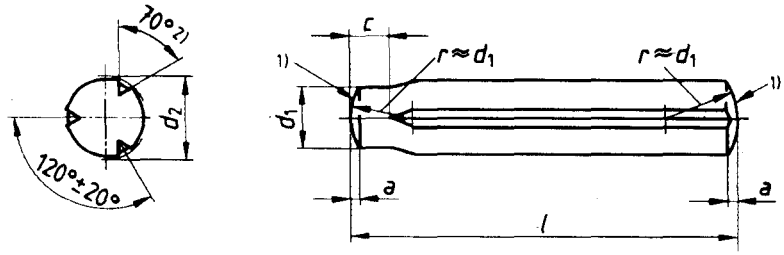
ISO 4042:–[1], *Fasteners – Electroplated coatings.*

ISO 8749:1986, *Pins and grooved pins – Shear test.*

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

3 Dimensions

See figure 1 and table 1.



1) Chamfer permissible.
2) The grooving angle 70° applies only to grooved pins made from steel as shown in clause 5. The grooving angle may be modified depending on resilience of material.

Figure 1

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

Table 1 — Dimensions

Dimensions in millimetres

d_1		nom.	1,5	2	2,5	3	4	5	6	8	10	12	16	20	25
		tol.	h9				h11								
c		max.	2	2	2,5	2,5	3	3	4	4	5	5	5	7	7
		min.	1	1	1,5	1,5	2	2	3	3	4	4	4	6	6
a		≈	0,2	0,25	0,3	0,4	0,5	0,63	0,8	1	1,2	1,6	2	2,5	3
Minimum shear strength, double[1] kN			1,6	2,84	4,4	6,4	11,3	17,6	25,4	45,2	70,4	101,8	181	283	444
l[2]			Expanded diameter, d_2[3), 4)]												
nom.	min.	max.	+0,05 0		±0,05							±0,1			
8	7,75	8,25	1,6	2,15											
10	9,75	10,25			2,65	3,2	4,25								
12	11,5	12,5						5,25	6,3	8,3	10,35	12,35	16,4	20,5	25,5
14	13,5	14,5													
16	15,5	16,5													
18	17,5	18,5													
20	19,5	20,5													
22	21,5	22,5													
24	23,5	24,5													
26	25,5	26,5													
28	27,5	28,5													
30	29,5	30,5													
32	31,5	32,5													
35	34,5	35,5													
40	39,5	40,5													
45	44,5	45,5													
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) Applies only to grooved pins made from steel as shown in clause 5.

2) The range of commercial lengths is between the stepped lines.

3) The expanded diameter d_2 applies only to pins made from steel as shown in clause 5. For other materials, for example stainless steel, a reduction amount shall be subtracted from the given values and should be agreed between customer and supplier.

4) For testing d_2, a GO/NO GO ring gauge should be used.

4 Application

The diameter of the hole into which the groove pin is to be inserted shall be equal to the nominal diameter d_1 of the mating pin and to tolerance class H11.

5 Requirements and reference International Standards

See table 2.

Table 2 — Requirements and reference International Standards

<table>
<tr><td rowspan="2">Material[1)]</td><td>Steel (St)</td><td>Austenitic stainless steel</td></tr>
<tr><td>Hardness 125 HV30 to 245 HV30</td><td>A1 in accordance with ISO 3506-1, hardness 210 HV30 to 280 HV30</td></tr>
<tr><td>Grooves</td><td colspan="2">Form of groove at the discretion of the supplier</td></tr>
<tr><td rowspan="2">Surface finish</td><td>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>Preferred coatings are black oxide, phosphate coating or zinc plating with chromate conversion coating (see ISO 9717 and ISO 4042).
Other coatings as agreed between customer and supplier.
All tolerances shall apply prior to the application of a plating or coating.</td></tr>
<tr><td>Workmanship</td><td colspan="2">Pins shall free of irregularities or detrimental defects.</td></tr>
<tr><td>Shear strength test</td><td>The test shall be in accordance with ISO 8749.</td><td></td></tr>
<tr><td>Acceptability</td><td colspan="2">The acceptance procedure is covered in ISO 3269.</td></tr>
<tr><td colspan="3">1) Other materials as agreed between customer and supplier.</td></tr>
</table>

6 Designation

EXAMPLE 1
A full-length parallel grooved steel pin with pilot with nominal diameter $d_1 = 6$ mm and nominal length $l = 50$ mm is designated as follows:

Grooved pin ISO 8739 – 6 × 50 – St

EXAMPLE 2
A full-length parallel grooved austenitic stainless steel pin of grade A1 with pilot, with nominal diameter $d_1 = 6$ mm and nominal length $l = 50$ mm is designated as follows:

Grooved pin ISO 8739 – 6 × 50 – A1

NATIONAL ANNEX A

(National Foreword)

A-1 PACKAGING

Unless otherwise specified the packaging of Grooved pins shall be done in cartons or boxes in quantities of 100, 500 or 1 000. Each carton shall have pins of one size only. The size and quantity shall be clearly indicated on the cartons or boxes.

A-2 MARKING

The cartons containing the pins shall be marked with size and indication of the source of manufacture.

A-3 BIS CERTIFICATION MARKING

Details available with the Bureau of Indian Standards.

(*Continued from second cover*)

The concerned Technical Committee has reviewed the provisions of the following International Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard:

International Standard	*Title*
ISO 8749 : 1986	Pins and grooved pins — Shear test
ISO 9717 : 1990	Phosphate conversion coatings for metals — Method of specifying requirements

As decided by the Committee additional requirements of packaging, marking and BIS Certification Marking are given in National Annex A. These additional requirements are part of this standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act,* 1986 to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards : Monthly Additions'.

This Indian Standard has been developed from Doc : No. MGP/BP 33 (0413).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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